



Toxic Chemical Release Inventory Reporting Forms and Instructions

Revised 2002 Version

Section 313
**of the Emergency Planning and
Community Right-to-Know Act**
(Title III of the Superfund Amendments
and Reauthorization Act of 1986)

March 2003

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More Information or Assistance

TRI Regulatory Questions:

If you have a question about a TRI reporting requirement, please call the toll free EPCRA Call Center at:

Phone: **800 424-9346 or 703 412-9810** (DC area callers please use this number)

TDD: **800 553-7672 or 703 412-3323**

When: **Monday-Friday, 9am-5pm Eastern Time**
Closed Federal Holidays

Internet: <www.epa.gov/epaoswer/hotline/>

TRI Software Support:

If you have questions about how to install or use *TRI-ME* or the *TRI Assistance Library*, please contact TRI Software Support:

When: **April 1, 2003 to July 31, 2003**
Monday-Friday, 8am-7pm Eastern Time

Phone: **877 470-4830 (toll free)**

E-mail: tri_software_support@cdc-moses.com

During other times of the year, please leave a message and we will return your call within three business days.

TRI Reporting Materials:

You can use *TRI-ME* and the *TRI Assistance Library* to electronically search and read TRI guidance documents, including this document. The TRI Web page contains links to every aspect of understanding, filling out, and submitting TRI reporting forms:

<www.epa.gov/tri/report/index.htm>

TRI Regional Contacts:

EPA Regional Coordinators often work closely with reporting facilities in their area, providing training and outreach, and assistance in completing forms. For a list of TRI Regional coordinators see **Appendix G**.

TRI State Contacts:

EPCRA section 313 requires facilities to submit reports to both EPA and their State. For a list of State designated section 313 contacts see **Appendix F**.

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Important Information for Reporting Year 2002

" **Early Public Availability of 2002 TRI Reports.** U.S. EPA is considering making the individual Reporting Year 2002 TRI forms, as submitted by each facility, publicly available before the traditional annual Public Data Release. This is in response to requests to make the TRI data publicly available earlier. This earlier availability would occur before EPA has completed all the data quality checks, compilations, and trend analysis that are traditionally done as part of the annual Public Data Release. For information on the annual Public Data Release, and this possible early release of the individual 2002 TRI forms, see the Agency's website <www.epa.gov/tri/tridata/index.htm>.

The following information updates or corrects the *Reporting Forms and Instructions* for Reporting Year 2002 as well as highlights new resources developed by EPA.

" All references to reporting year 2001 and all other date related references have been changed to reflect the current reporting year (i.e., reporting year 2001 has been changed to reporting year 2002; prior year 2000 was changed to prior year 2001, etc.). This change was made for the Form R, Form A Certification Statement, and the instructions.

" EPA's mailing address for TRI submissions has changed. See page 5 for the new address.

" New for reporting year 2002 is a field in Section 4.3 for the email address of the technical contact. If the technical contact at your facility does not have an email address you should enter NA.

" The M codes used in Column C of Section 6.2 of the Form R have been updated. M72 (Landfill/Disposal Surface Impoundment) was deleted and replaced by M codes M63 (Surface Impoundment), M64 (Other Landfills) and M65 (RCRA Subtitle C Landfills).

" Starting with reporting year 2002, facilities can determine their latitude and longitude by using the *TRI Facility Siting Tool* found on the TRI home page. For more information about the siting tool see Appendix E.

" Starting with reporting year 2001, lead and lead compounds are classified as persistent, bioaccumulative and toxic (PBT) chemicals. The reporting thresholds for lead and lead compounds, except when lead is contained in stainless steel, brass or bronze alloys, have been lowered to 100 pounds. For specific guidance on the reporting of lead, see page 15.

" The EPCRA section 313 Chemical List (Table II) has been updated to reflect that the *de minimis* exemption is not applicable for lead and lead compounds, except for supplier notification purposes and except for lead when it is contained in stainless steel, brass or bronze alloys (see Appendix D).

" Starting with reporting year 2001 the qualifier for isopropyl alcohol has been changed to match exactly the qualifier that is listed in the Code of Federal Regulations, the new qualifier is "Only persons who manufacture by the strong acid process are subject, no supplier notification." EPA believes that use of this qualifier will make it clearer that only facilities that manufacture isopropyl alcohol by the strong acid process are subject to reporting (i.e., processors and users of isopropyl alcohol are not subject to reporting).

" Table II, which lists all EPCRA section 313 chemicals and chemical categories with their respective *de minimis* limits, has been updated.

" For a list of all EPCRA section 313 delisted chemicals, visit the TRI Home page <www.epa.gov/tri>.

" Starting with reporting year 2000, new chemical activity threshold levels are set for persistent, bioaccumulative and toxic (PBT) chemicals and chemical categories (Section B.4.e).

" For PBT chemicals (except lead when it is contained in stainless steel, brass or bronze alloy) and chemical categories, the *de minimis* exemption, Form A, and range reporting are not allowed (Section B.4.e).

" The reverse side of the pages of the Form R and Form A Certification Statement include a box stating, "This page intentionally left blank." Please do not copy double-sided.

Important Information for Reporting Year 2002

- " Appendix A contains reporting instructions specific to Federal facilities that are required to report under Executive Order 13148. Further guidance for Federal facilities may be obtained from the EPCRA Call Center at 800 424-9346, or 703 412-9810.
- " Appendix C, "Common Errors in Completing Form R Reports and Making Data Available" has been updated.
- " The State and Regional contact lists have been updated (Appendices F and G).
- " The Alternate Threshold provides eligible facilities with the option of submitting a simplified Form A Certification Statement instead of the Form R report for non-PBT chemicals and chemical categories.
- " A list of EPCRA section 313 industry-specific and chemical-specific guidance documents and information on ordering these documents free of charge is provided on page vii.
- ' The Reporting Forms and Instructions guidance document no longer includes a pre-printed Form R page 1. The Agency has discontinued preparing these pre-printed forms since less than 6% of the facilities used the forms when they were last provided in RY2000. Further, the Agency strongly encourages facilities to submit over the Internet or on floppy diskettes using the *TRI-ME* reporting software. Facilities can still load (import) into *TRI-ME* some of their data from the prior years.

The following information identifies changes to the TRI Reporting Software.

- ' The ATRS reporting software has been discontinued. EPA encourages ATRS users to submit reports using the *TRI-ME* reporting software. ATRS can still be used to revise data for reporting years 1987-2001.
- " Included in this reporting package is a compact disk (CD) that contains several industry-specific and chemical-specific regulatory guidance documents, the *EPCRA Section 313 Questions and Answers* book, *TRI-ME* (Windows 95, 98 and NT; Windows 2000 compatible) and *TRI-ME* supporting documentation. These documents also are available via the Internet at www.epa.gov/tri.
- ' EPA encourages you to use *TRI-ME* to submit reports electronically over the Internet via EPA's Central Data Exchange (CDX). New in reporting year 2002: previous reporters can submit electronically using *TRI-ME* without sending any paper to EPA. If you do not choose to submit via the Internet, EPA encourages you to submit your report on diskette using *TRI-ME*.

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TRI Reporting Software

Toxics Releases Inventory - Made Easy (TRI-ME) Software 2002

The *TRI-ME 2002* software helps facilities in determining and completing their Emergency Planning and Community Right-to-Know (EPCRA) section 313 and Pollution Prevention Act (PPA) section 6607 obligations. *TRI-ME* is an interactive, intelligent, user-friendly software tool that guides facilities through the TRI reporting experience. By leading prospective reporters through a series of logically ordered questions, *TRI-ME* streamlines the analysis needed to determine if a user must complete a Form R report or Form A Certification Statement for a particular chemical. For those facilities required to report, the software provides the user with guidance for each data element on the reporting forms. Additionally, this software has a one-stop guidance feature, the TRI Assistance Library that allows users to search the statute, regulations, and many EPCRA section 313 guidance documents by key word. For the more experienced reporter, *TRI-ME* allows direct data entry onto electronic versions of the Form R and Form A Certification Statement. *TRI-ME* will check the data for common errors and then prepare the forms. All of the information contained in this RY2002 Reporting Forms and Instructions book is contained within *TRI-ME*.

TRI-ME allows the user to submit the forms on paper, floppy disk, or electronically via an Internet connection. Facilities that used ATRS for RY 2000 or RY 2001, can load most of this data into *TRI-ME*. New this year to *TRI-ME* is the ability to submit electronically over the Internet using EPA's Central Data Exchange without mailing any paper to EPA. In past years, facilities had to submit a signed certification statement. Now facilities can certify their submissions electronically.

Toxics Release Inventory Assistance Library

The TRI Assistance Library is a searchable, indexed file that contains the statutes, the regulations, and most of the key guidance documents a facility is likely to need for TRI reporting. The TRI Assistance Library is integrated into *TRI-ME*.

What Happened to the Automated TRI Reporting Software (ATRS)?

EPA is no longer producing new versions of ATRS. For Reporting Year 2002, facilities are encouraged to use the TRI-Made Easy (*TRI-ME*) software. *TRI-ME* was distributed as a pilot for Reporting Year 2000. In Reporting Year 2001, EPA distributed both *TRI-ME* and ATRS to all TRI reporting facilities.

Can I Use or Load Last Year's ATRS data into *TRI-ME*?

If you used ATRS for Reporting Year 2000 or 2001, you can load your ATRS database file directly into *TRI-ME*. Or, you can load the magnetic media files (sometimes called the TRI 17 flat files) that ATRS produced directly into *TRI-ME*.

Can I Use *TRI-ME* if I Have My Own TRI Software?

Some facilities have their own software or use private software to assist in preparing their TRI reports. This "third party software" is often designed to produce output files that match EPA's Magnetic Media File Formats (sometimes called the TRI 17 flat files). You may load these flat files directly into *TRI-ME* and then use *TRI-ME* to check your forms for common errors. You can then also use *TRI-ME* to submit the forms to U.S. EPA and your state.

What Are the Key Features of *TRI-ME*?

- ' An expert desk top software tool that guides facilities through the process of determining whether they must report based on the SIC codes, number of employees and chemical threshold criteria.
- ' Walks users through the process of preparing and submitting their forms. Many routine tasks associated with the preparation and submission of the forms have been eliminated or streamlined.
- ' Assists facilities in understanding each element of the Form R and Form A Certification Statement.
- ' Allows expert users to bypass most of the detailed assistance and directly enter data into the forms.
- ' Enables users to access and search the TRI Assistance Library to find additional guidance from EPA on how to report. With *TRI-ME* there is often no need to obtain a paper version of an EPA TRI guidance document.
- ' Contains extensive intelligence to prevent facilities from making common errors.
- ' Alerts users to possible errors so that they can double check their forms before submitting.
- ' Allows users to load their data from prior years. *TRI-ME* can load data from:

TRI Reporting Software

Allows users to load their data from prior years. *TRI-ME* can load data from:

- RY2000 and RY2001 ATRS databases;
- RY2001 *TRI-ME* databases; and
- the magnetic media flat files for RY2000, RY2001, and RY2002

New this year, *TRI-ME* allows prior TRI reporters to submit electronically without the need to separately mail paper certification to U.S. EPA.

Also enables facilities to submit their forms on a floppy disc or on traditional paper forms to U.S. EPA and their state.

Chemical and Industry Guidance Documents

To receive a copy of any of the EPCRA section 313 documents listed below, check the box(es) next to the desired document(s). There is no charge for any of these documents. Be sure to type or clearly print your full mailing address in the space provided on the third page of this form (page ix). Send this request form to the address below or call 202 564-9554. Many of these documents are available via the Internet. For current versions, visit the TRI Home Page <www.epa.gov/tri>.

U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Attn: TRI Documents
MC: 2844T
Washington, DC 20460

202 564-9554
Email: TRIDOCES@epa.gov

I. General Guidance

40 CFR 372, Toxic Chemical Release Reporting; Community Right-to-Know; Final Rule

A reprint of the final EPCRA section 313 rule as it appeared in the *Federal Register* (FR) February 16, 1988 (53 FR 4500) (OTSFR 021688).

Common Synonyms for Chemicals Listed Under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPA 745-R-95-008)

This glossary contains chemical names and their synonyms for substances covered by the reporting requirements of EPCRA section 313. The glossary was developed to aid in determining whether a facility manufactures, processes, or otherwise uses a chemical subject to EPCRA section 313 reporting.

EPCRA Section 313; Toxic Chemical Release Inventory; Data Quality Checks to Prevent Common Reporting Errors on Form R/Form A August 1998 (EPA 745-R-98-012)

EPCRA Section 313 Questions and Answers — Revised 1998 Version December 1998 (EPA 745-B-98-004)

The revised 1998 *EPCRA Section 313 Questions and Answers* document assists regulated facilities in complying with the reporting requirements of EPCRA section 313. This updated document presents interpretive guidance in the form of answers to many commonly asked questions on compliance with EPCRA section 313. In addition, this document

includes comprehensive written directives to assist covered facilities in understanding some of the more complicated regulatory issues. This updated guidance document is intended to supplement the instructions for completing the Form R and the Alternate Threshold Certification Statement (Form A).

EPCRA Section 313 Questions and Answers Addendum for Federal Facilities May 2000 (EPA 745-R-00-003)

This document is an addendum to the EPCRA section 313 Questions and Answers—Revised 1998 Version. It provides additional assistance to federal facilities in complying with EPCRA section 313. Federal facilities, which are subject to compliance under EPCRA through Executive Order 13148, frequently have operations that are different from the private sector facilities subject to EPCRA. The document contains questions and answers that address some of those differences.

EPCRA Section 313 Release and Other Waste Management Reporting Requirements February 2001 (EPA 260/K-01-001)

The brochure alerts businesses to their reporting obligations under EPCRA section 313 and assists in determining whether their facility is required to report. The brochure contains the EPA regional contacts, the list of EPCRA section 313 toxic chemicals and a description of the Standard Industrial Classification (SIC) codes subject to EPCRA section 313.

Persistent Bioaccumulative Toxic (PBT) Chemicals; Final Rule (64 FR 58666)

A reprint of the final rule that appeared in the *Federal Register* of October 29, 1999. This rule adds certain PBT chemicals and chemical categories for reporting year 2000 and beyond under EPCRA section 313, lowers their activity thresholds and modifies certain reporting exemptions and requirements for PBT chemicals and chemical categories. In a separate action, as part of the October 29, 1999 rulemaking, EPA added vanadium (except when contained in alloy) and vanadium compounds. These are not listed as PBT chemicals.

Supplier Notification Requirements (EPA 560-4-91-006)

This pamphlet assists chemical suppliers who may be subject to the supplier notification requirements, gives examples of situations which require notification, describes the trade secret provision, and contains a sample notification.

- " **Toxic Chemical Release Inventory Reporting Forms and Instructions Revised 2001 Version**
February 2003 (EPA 260-B-03-001)
- " **Toxics Release Inventory: Reporting Modifications Beginning with 1995 Reporting Year**
February 1995 (EPA 745-R-95-009)
- " **Trade Secrets Rule and Form (53 FR 28772)**

A reprint of the final rule that appeared in the *Federal Register* of July 29, 1988. This rule implements the trade secrets provision of the Emergency Planning and Community Right-to-Know Act (section 322) and includes a copy of the trade secret substantiation form.
- " **Toxics Release Inventory List of Toxic Chemicals within the Water Dissociable Nitrate Compounds Category and Guidance for Reporting**
December 2000 (EPA 745-R-00-006)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals: Pesticides and Other Persistent Bioaccumulative Toxic (PBT) Chemicals**
August 2001 (EPA 260-B-01-005)
- " **Toxics Release Inventory List of Toxic Chemicals within the Polychlorinated Alkanes Category and Guidance for Reporting**
June 1999 (EPA 745-B-99-023)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals: Polycyclic Aromatic Compounds Category**
August 2001 (EPA 260-B-01-003)
- " **Toxics Release Inventory List of Toxic Chemicals within the Strychnine and Salts Category and Guidance for Reporting**
June 1999 (EPA 745-R-99-011)
- " **Emergency Planning and Community Right-to-Know Act Section 313: Guidance for Reporting Sulfuric Acid (acid aerosols including mists, vapors, gas, fog and other airborne forms of any particle size)**
March 1998 (EPA745-R-97-007)
- " **Toxics Release Inventory List of Toxic Chemicals within Warfarin Category**
June 1999 (EPA745-B-99-011)
- " **Toxics Release Inventory List of Toxic Chemicals within Ethylenebisdithiocarbamic Acid, Salts and Esters Category and List of Mixtures that Contain the Individually listed Chemicals Maneb, Metiram, Nabam, and Zineb**
September 2001 (EPA 260-B-01-026)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals: Mercury and Mercury Compounds Category**
August 2001 (EPA 260-B-01-004)
- " **Emergency Planning and Community Right-to-Know Act Section 313: List of Toxic Chemicals within the Chlorophenols Category**
June 1999 (EPA745-B-99-013)
- " **Toxics Release Inventory List of Toxic Chemicals within the Glycol Ethers Category and Guidance for Reporting**
December 2000 (EPA745-R-00-004)
- " **Emergency Planning and Community Right-to-Know Act Section 313: Guidance for Reporting Hydrochloric Acid (acid aerosols including mists, vapors, gas, fog and other airborne forms of any particle size)**
December 1999 (EPA 745-B-99-014)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Releases and Other Waste Mangement Activities of Toxic Chemicals: Lead and Lead Compounds**
November 2001 (EPA-260-B-01-027)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals within the Dioxin and Dioxin-like Compounds Category**
December 2000 (EPA 745-R-00-005)
- " **Toxics Release Inventory List of Toxic Chemicals within the Nicotine and Salt Category and Guidance for Reporting**
June 1999 (EPA 745-R-99-010)
- " **Emergency Planning and Community Right-to-Know Act - Section 313: Guidance for Reporting Toxic Chemicals within the Dioxin and Dioxin-like Compounds Category**
December 2000 (EPA 745-B-00-021)

III. Industry-Specific Guidance

EPA has developed a group of individual guidance documents for certain industries.

- " **EPCRA Section 313: Guidance for Chemical Distribution Facilities**
January 1999 (EPA 745-B-99-005)
- " **EPCRA Section 313: Guidance for Coal Mining Facilities**
February 2000 (EPA 745-B-00-003)
- " **EPCRA Section 313: Guidance for Electricity Generating Facilities**
February 2000 (EPA 745-B-00-004)
- " **EPCRA Section 313 Reporting Guidance for Food Processors**
September 1998 (EPA 745-R-98-011)
- " **EPCRA Section 313 Reporting Guidance for the Leather Tanning and Finishing Industry**
April 2000 (EPA 745-B-00-012)
- " **EPCRA Section 313: Guidance for Metal Mining Facilities**
January 1999 (EPA 745-B-99-001)
- " **EPCRA Section 313: Guidance for Petroleum Terminals and Bulk Storage Facilities**
February 2000 (EPA 745-B-00-002)
- " **Emergency Planning and Community Right-to-Know Act Section 313 Reporting Guidance for the Presswood and Laminated Products Industry**
August 2001 (EPA 260-B-01-013)
- " **EPCRA Section 313 Reporting Guidance for the Printing, Publishing, and Packaging Industry**
May 2000 (EPA 745-B-00-005)
- " **EPCRA Section 313: Guidance for RCRA Subtitle C TSD Facilities and Solvent Recovery Facilities**
January 1999 (EPA 745-B-99-004)
- " **EPCRA Section 313 Reporting Guidance for Rubber and Plastics Manufacturing**
May 2000 (EPA 745-B-00-017)
- " **EPCRA Section 313 Reporting Guidance for Semiconductor Manufacturing**
July 1999 (EPA 745-R-99-007)
- " **EPCRA Section 313 Reporting Guidance for Spray Application and Electrodeposition of Organic Coatings**
December 1998 (EPA 745-R-98-014)
- " **EPCRA Section 313 Reporting Guidance for the Textile Processing Industry**
May 2000 (EPA 745-B-00-008)

PLEASE TYPE MAILING ADDRESS HERE (DO NOT ATTACH BUSINESS CARDS)

Name/Title _____

Company Name _____

Mail Stop _____

Street Address _____

P.O. Box _____

City/State/ZIP Code _____

Paperwork Reduction Act Notice: The annual public burden related to the Form R, which is approved under OMB Control No. 2070-0093, is estimated to average 52.1 hours per response. The annual public burden related to the Form A, which is approved under OMB Control No. 2070-0143, is based on a combination of the estimated burdens for 1) determining whether a listed toxic chemical is eligible for certification under the alternate threshold, and 2) completing the Form A. The burden of determining eligibility for certification is estimated to average 33.2 hours for each chemical that is certified. The burden of completing the Form A is estimated to average 1.4 hours, regardless of the number of chemicals being certified. The total burden per response is the combination of these two, and will vary depending on the number of listed toxic chemicals being certified.

According to the Paperwork Reduction Act, “burden” means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. For this collection it includes the time needed to review instructions; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for this information collection appear above and on the forms. In addition, the OMB control numbers for EPA's regulations, after initial display in the final rule, are listed in 40 CFR part 9.

Send comments on the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, OEI Collection Strategies Division, U.S. Environmental Protection Agency (Mail Code 2822T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460. Include the OMB control number in any correspondence, but do not submit the requested information to this address. The completed forms should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulation.

(IMPORTANT: Type or print; read instructions before completing form)



EPA
United States
Environmental Protection
Agency

FORM R

TOXIC CHEMICAL RELEASE INVENTORY REPORTING FORM

Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986,
also known as Title III of the Superfund Amendments and Reauthorization Act

WHERE TO SEND COMPLETED FORMS: 1. TRI Data Processing Center
P.O Box 1513
Lanham, MD 20703-1513
ATTN: TOXIC CHEMICAL RELEASE INVENTORY

2. APPROPRIATE STATE OFFICE
(See instructions in Appendix F)

Enter "X" here if this
is a revision

For EPA use only

Important: See instructions to determine when "Not Applicable (NA)" boxes should be checked.

PART I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR _____

SECTION 2. TRADE SECRET INFORMATION

| | | | | | |
|------------|--|------------|---|------------------------------------|--------------------------------------|
| 2.1 | Are you claiming the toxic chemical identified on page 2 trade secret? | 2.2 | Is this copy | <input type="checkbox"/> Sanitized | <input type="checkbox"/> Unsanitized |
| | <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms) | | <input type="checkbox"/> No (Do not answer 2.2; Go to Section 3) | (Answer only if "YES" in 2.1) | |

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that I have reviewed the attached documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report are accurate based on reasonable estimates using data available to the preparers of this report.

| | | |
|--|------------|--------------|
| Name and official title of owner/operator or senior management official: | Signature: | Date Signed: |
| | | |

SECTION 4. FACILITY IDENTIFICATION

| | | |
|--------------------------------|---|------------------|
| 4.1 | TRI Facility ID Number | |
| Facility or Establishment Name | Facility or Establishment Name or Mailing Address(if different from street address) | |
| Street | Mailing Address | |
| City/County/State/Zip Code | City/State/Zip Code | Country (Non-US) |

4.2 This report contains information for:
(Important : check a or b; check c or d if applicable) a. An entire facility b. Part of a facility c. A Federal facility d. GOCO

| | | |
|------------|------------------------|--------------------------------------|
| 4.3 | Technical Contact Name | Telephone Number (include area code) |
| | Email Address | |

| | | |
|------------|---------------------|--------------------------------------|
| 4.4 | Public Contact Name | Telephone Number (include area code) |
|------------|---------------------|--------------------------------------|

| | | | | | | | | |
|------------|-------------------------|---------|----|----|----|----|----|----|
| 4.5 | SIC Code (s) (4 digits) | Primary | a. | b. | c. | d. | e. | f. |
| | | | | | | | | |

| | | | | | | | | |
|------------|----------|---------|---------|---------|-----------|---------|---------|---------|
| 4.6 | Latitude | Degrees | Minutes | Seconds | Longitude | Degrees | Minutes | Seconds |
| | | | | | | | | |

| | | | | | | | |
|------------|---------------------------------------|------------|---|------------|--|-------------|--|
| 4.7 | Dun & Bradstreet Number(s) (9 digits) | 4.8 | EPA Identification Number (RCRA I.D. No.) (12 characters) | 4.9 | Facility NPDES Permit Number(s) (9 characters) | 4.10 | Underground Injection Well Code (UIC) I.D. Number(s) (12 digits) |
| a. | | a. | | a. | | a. | |
| b. | | b. | | b. | | b. | |

SECTION 5. PARENT COMPANY INFORMATION

| | | |
|------------|--|-----------------------------|
| 5.1 | Name of Parent Company | NA <input type="checkbox"/> |
| 5.2 | Parent Company's Dun & Bradstreet Number | NA <input type="checkbox"/> |

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double-sided!

EPA FORM R
PART II. CHEMICAL-SPECIFIC INFORMATION

TRI Facility ID Number

Toxic Chemical, Category or Generic Name

SECTION 1. TOXIC CHEMICAL IDENTITY (Important: DO NOT complete this section if you completed Section 2 below.)

1.1 CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.)

1.2 Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.)

1.3 Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.)

1.4 Distribution of Each Member of the Dioxin and Dioxin-like Compounds Category.
(If there are any numbers in boxes 1-17, then every field must be filled in with either 0 or some number between 0.01 and 100. Distribution should be reported in percentages and the total should equal 100%. If you do not have speciation data available, indicate NA.)

| | | | | | | | | | | | | | | | | | |
|----|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| NA | <input type="checkbox"/> |

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

2.1 Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.)

SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY
(Important: Check all that apply.)

| | | |
|---|---|--|
| 3.1 Manufacture the toxic chemical: | 3.2 Process the toxic chemical: | 3.3 Otherwise use the toxic chemical: |
| a. <input type="checkbox"/> Produce b. <input type="checkbox"/> Import If produce or import: c. <input type="checkbox"/> For on-site use/processing d. <input type="checkbox"/> For sale/distribution e. <input type="checkbox"/> As a byproduct f. <input type="checkbox"/> As an impurity | a. <input type="checkbox"/> As a reactant b. <input type="checkbox"/> As a formulation component c. <input type="checkbox"/> As an article component d. <input type="checkbox"/> Repackaging e. <input type="checkbox"/> As an impurity | a. <input type="checkbox"/> As a chemical processing aid b. <input type="checkbox"/> As a manufacturing aid c. <input type="checkbox"/> Ancillary or other use |

SECTION 4. MAXIMUM AMOUNT OF THE TOXIC CHEMICAL ONSITE AT ANY TIME DURING THE CALENDAR YEAR

4.1 (Enter two-digit code from instruction package.)

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE

| | | A. Total Release (pounds/year*) (Enter range code or estimate**) | B. Basis of Estimate (enter code) | C. % From Stormwater |
|---------------------------|--|---|--------------------------------------|----------------------|
| 5.1 | Fugitive or non-point air emissions | NA <input type="checkbox"/> | | |
| 5.2 | Stack or point air emissions | NA <input type="checkbox"/> | | |
| 5.3 | Discharges to receiving streams or water bodies (enter one name per box) | | | |
| Stream or Water Body Name | | | | |
| 5.3.1 | | | | |
| 5.3.2 | | | | |
| 5.3.3 | | | | |

If additional pages of Part II, Section 5.3 are attached, indicate the total number of pages in this box and indicate the Part II, Section 5.3 page number in this box. (example: 1,2,3, etc.)

* For Dioxin or Dioxin-like compounds, report in grams/year

** Range Codes: A= 1 - 10 pounds; B= 11- 499 pounds; C= 500 - 999 pounds.

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double-sided!

| | |
|--|--|
| EPA FORM R PART II. CHEMICAL - SPECIFIC INFORMATION (CONTINUED) | TRI Facility ID Number |
| | |
| | Toxic Chemical, Category or Generic Name |

SECTION 5. QUANTITY OF THE TOXIC CHEMICAL ENTERING EACH ENVIRONMENTAL MEDIUM ONSITE (Continued)

| | | NA | A. Total Release (pounds/year*) (enter range code** or estimate) | B. Basis of Estimate (enter code) |
|--------|--|--------------------------|--|-----------------------------------|
| 5.4.1 | Underground Injection onsite to Class I Wells | <input type="checkbox"/> | | |
| 5.4.2 | Underground Injection onsite to Class II-V Wells | <input type="checkbox"/> | | |
| 5.5 | Disposal to land onsite | | | |
| 5.5.1A | RCRA Subtitle C landfills | <input type="checkbox"/> | | |
| 5.5.1B | Other landfills | <input type="checkbox"/> | | |
| 5.5.2 | Land treatment/application farming | <input type="checkbox"/> | | |
| 5.5.3 | Surface Impoundment | <input type="checkbox"/> | | |
| 5.5.4 | Other disposal | <input type="checkbox"/> | | |

SECTION 6. TRANSFERS OF THE TOXIC CHEMICAL IN WASTES TO OFF-SITE LOCATIONS
6.1 DISCHARGES TO PUBLICLY OWNED TREATMENT WORKS (POTWs)
6.1.A Total Quantity Transferred to POTWs and Basis of Estimate

| | |
|--|--|
| 6.1.A.1. Total Transfers (pounds/year*) (enter range code** or estimate) | 6.1.A.2 Basis of Estimate (enter code) |
| | |

| | | | | | | | |
|--------------|-----------|-------|--|--------|--|-----|--|
| 6.1.B. ____ | POTW Name | | | | | | |
| POTW Address | | | | | | | |
| City | | State | | County | | Zip | |

| | | | | | | | |
|--------------|-----------|-------|--|--------|--|-----|--|
| 6.1.B. ____ | POTW Name | | | | | | |
| POTW Address | | | | | | | |
| City | | State | | County | | Zip | |

If additional pages of Part II, Section 6.1 are attached, indicate the total number of pages

 in this box and indicate the Part II, Section 6.1 page number in this box (example: 1,2,3, etc.)

SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS

| | | | | | | | |
|--|--|-------|--|--------|--|------------------------------|-----------------------------|
| 6.2. ____ Off-Site EPA Identification Number (RCRA ID No.) | | | | | | | |
| Off-Site Location Name | | | | | | | |
| Off-Site Address | | | | | | | |
| City | | State | | County | | Zip | |
| | | | | | | | Country (Non-US) |
| Is location under control of reporting facility or parent company? | | | | | | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

* For Dioxin or Dioxin-like compounds, report in grams/year

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double-sided!

| | |
|---|--|
| EPA FORM R | TRI Facility ID Number |
| PART II. CHEMICAL-SPECIFIC INFORMATION (CONTINUED) | Toxic Chemical, Category or Generic Name |

SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATIONS (Continued)

| A. Total Transfers (pounds/year*) (enter range code** or estimate) | B. Basis of Estimate (enter code) | C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code) |
|---|--------------------------------------|--|
| 1. | 1. | 1. M |
| 2. | 2. | 2. M |
| 3. | 3. | 3. M |
| 4. | 4. | 4. M |

6.2. ___ Off-Site EPA Identification Number (RCRA ID No.)

Off-Site location Name

Off-Site Address

| | | | | |
|------|-------|--------|-----|---------------------|
| City | State | County | Zip | Country (Non-US) |
|------|-------|--------|-----|---------------------|

Is location under control of reporting facility or parent company? Yes No

| A. Total Transfers (pounds/year*) (enter range code** or estimate) | B. Basis of Estimate (enter code) | C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code) |
|---|--------------------------------------|--|
| 1. | 1. | 1. M |
| 2. | 2. | 2. M |
| 3. | 3. | 3. M |
| 4. | 4. | 4. M |

SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY

Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category.

| a. General Waste Stream (enter code) | b. Waste Treatment Method(s) Sequence [enter 3-character code(s)] | c. Range of Influent Concentration | d. Waste Treatment Efficiency Estimate | e. Based on Operating Data ? | | |
|---|--|------------------------------------|--|------------------------------|---|--|
| 7A.1a | 7A.1b | 7A.1c | 7A.1d | 7A.1e | | |
| | 1 | | | | 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | 3 | | | | 4 | |
| 6 | 7 | 8 | % | | | |
| 7A.2a | 7A.2b | 7A.2c | 7A.2d | 7A.2e | | |
| | 1 | | | | 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | 3 | | | | 4 | |
| 6 | 7 | 8 | % | | | |
| 7A.3a | 7A.3b | 7A.3c | 7A.3d | 7A.3e | | |
| | 1 | | | | 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | 3 | | | | 4 | |
| 6 | 7 | 8 | % | | | |
| 7A.4a | 7A.4b | 7A.4c | 7A.4d | 7A.4e | | |
| | 1 | | | | 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | 3 | | | | 4 | |
| 6 | 7 | 8 | % | | | |
| 7A.5a | 7A.5b | 7A.5c | 7A.5d | 7A.5e | | |
| | 1 | | | | 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| | 3 | | | | 4 | |
| 6 | 7 | 8 | % | | | |

If additional pages of Part II, Section 6.2/7A are attached, indicate the total number of pages in this box and indicate the Part II, Section 6.2/7A page number in this box : (example: 1,2,3, etc)

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EPA FORM R

PART II. CHEMICAL-SPECIFIC INFORMATION (CONTINUED)

TRI Facility ID Number

Toxic Chemical, Category or Generic Name

SECTION 7B. ON-SITE ENERGY RECOVERY PROCESSES

Not Applicable (NA) - Check here if no on-site energy recovery is applied to any waste stream containing the toxic chemical or chemical category.

Energy Recovery Methods [enter 3-character code(s)]

1 2 3 4

SECTION 7C. ON-SITE RECYCLING PROCESSES

Not Applicable (NA) - Check here if no on-site recycling is applied to any waste stream containing the toxic chemical or chemical category.

Recycling Methods [enter 3-character code(s)]

1. 2. 3. 4. 5.
6. 7. 8. 9. 10.

SECTION 8. SOURCE REDUCTION AND RECYCLING ACTIVITIES

| | | Column A Prior Year (pounds/year*) | Column B Current Reporting Year (pounds/year*) | Column C Following Year (pounds/year*) | Column D Second Following Year (pounds/year*) | |
|--------|--|--|--|--|---|--------------------------------|
| 8.1 | Quantity released *** | | | | | |
| 8.2 | Quantity used for energy recovery onsite | | | | | |
| 8.3 | Quantity used for energy recovery offsite | | | | | |
| 8.4 | Quantity recycled onsite | | | | | |
| 8.5 | Quantity recycled offsite | | | | | |
| 8.6 | Quantity treated onsite | | | | | |
| 8.7 | Quantity treated offsite | | | | | |
| 8.8 | Quantity released to the environment as a result of remedial actions, catastrophic events, or one-time events not associated with production processes (pounds/year) | | | | | |
| 8.9 | Production ratio or activity index | | | | | |
| 8.10 | Did your facility engage in any source reduction activities for this chemical during the reporting year? If not, enter "NA" in Section 8.10.1 and answer Section 8.11. | | | | | |
| | Source Reduction Activities [enter code(s)] | Methods to Identify Activity (enter codes) | | | | |
| 8.10.1 | | a. | b. | c. | | |
| 8.10.2 | | a. | b. | c. | | |
| 8.10.3 | | a. | b. | c. | | |
| 8.10.4 | | a. | b. | c. | | |
| 8.11 | Is additional information on source reduction, recycling, or pollution control activities included with this report? (Check one box) | | | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |

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**TOXIC CHEMICAL RELEASE INVENTORY
FORM A**

WHERE TO SEND COMPLETED FORMS: 1. TRI Data Processing Center
P.O Box 1513
Lanham, MD 20703-1513
ATTN: TOXIC CHEMICAL RELEASE INVENTORY

Enter "X" here if this is a revision

For EPA use only

Important: See instructions to determine when "Not Applicable (NA)" boxes should be checked.

PART I. FACILITY IDENTIFICATION INFORMATION

SECTION 1. REPORTING YEAR _____

SECTION 2. TRADE SECRET INFORMATION

| | | | | | |
|------------|---|------------|--|------------------------------------|--------------------------------------|
| 2.1 | Are you claiming the toxic chemical identified on page 2 trade secret? | 2.2 | Is this copy | <input type="checkbox"/> Sanitized | <input type="checkbox"/> Unsanitized |
| | <input type="checkbox"/> Yes (Answer question 2.2; Attach substantiation forms) | | <input type="checkbox"/> No (Do not answer 2.2; Go to Section 3) | (Answer only if "YES" in 2.1) | |

SECTION 3. CERTIFICATION (Important: Read and sign after completing all form sections.)

I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the statement, the annual reportable amount as defined in 40 CFR 372.27 (a), did not exceed 500 pounds for this reporting year and that the chemical was manufactured, processed, or otherwise used in an amount not exceeding 1 million pounds during this reporting year.

| | | |
|--|------------|--------------|
| Name and official title of owner/operator or senior management official: | Signature: | Date Signed: |
| | | |

SECTION 4. FACILITY IDENTIFICATION

| | | |
|--------------------------------|---|------------------|
| 4.1 | TRI Facility ID Number | |
| Facility or Establishment Name | Facility or Establishment Name or Mailing Address(if different from street address) | |
| Street | Mailing Address | |
| City/County/State/Zip Code | City/State/Zip Code | Country (Non-US) |

4.2 This report contains information for: (Important : check c or d if applicable)

c. A Federal facility d. GOCO

| | | |
|------------|------------------------|--------------------------------------|
| 4.3 | Technical Contact Name | Telephone Number (include area code) |
| | Email Address | |

4.4 Intentionally left blank

| | | | | | | | | |
|------------|-------------------------|---------|---------|---------|-----------|---------|---------|---------|
| 4.5 | SIC Code (s) (4 digits) | Primary | | | | | | |
| | | a. | b. | c. | d. | e. | f. | |
| 4.6 | Latitude | Degrees | Minutes | Seconds | Longitude | Degrees | Minutes | Seconds |
| | | | | | | | | |

| | | | | | | | |
|------------|---------------------------------------|------------|---|------------|--|-------------|--|
| 4.7 | Dun & Bradstreet Number(s) (9 digits) | 4.8 | EPA Identification Number (RCRA I.D. No.) (12 characters) | 4.9 | Facility NPDES Permit Number(s) (9 characters) | 4.10 | Underground Injection Well Code (UIC) I.D. Number(s) (12 digits) |
| a. | | a. | | a. | | a. | |
| b. | | b. | | b. | | b. | |

SECTION 5. PARENT COMPANY INFORMATION

| | | |
|------------|--|-----------------------------|
| 5.1 | Name of Parent Company | NA <input type="checkbox"/> |
| 5.2 | Parent Company's Dun & Bradstreet Number | NA <input type="checkbox"/> |

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double-sided!

EPA FORM A
PART II. CHEMICAL IDENTIFICATION **TRIFID:**

Do not use this form for reporting PBT chemicals including Dioxin and Dioxin-like Compounds*

SECTION 1. TOXIC CHEMICAL IDENTITY Report ___ of ___

| | |
|-----|--|
| 1.1 | CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) |
| 1.2 | Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) |
| 1.3 | Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.) |

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

| | |
|-----|--|
| 2.1 | Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.) |
|-----|--|

SECTION 1. TOXIC CHEMICAL IDENTITY Report ___ of ___

| | |
|-----|--|
| 1.1 | CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) |
| 1.2 | Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) |
| 1.3 | Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.) |

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

| | |
|-----|--|
| 2.1 | Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.) |
|-----|--|

SECTION 1. TOXIC CHEMICAL IDENTITY Report ___ of ___

| | |
|-----|--|
| 1.1 | CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) |
| 1.2 | Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) |
| 1.3 | Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.) |

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

| | |
|-----|--|
| 2.1 | Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.) |
|-----|--|

SECTION 1. TOXIC CHEMICAL IDENTITY Report ___ of ___

| | |
|-----|--|
| 1.1 | CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) |
| 1.2 | Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) |
| 1.3 | Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.) |

SECTION 2. MIXTURE COMPONENT IDENTITY (Important: DO NOT complete this section if you completed Section 1 above.)

| | |
|-----|--|
| 2.1 | Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.) |
|-----|--|

* See the TRI Reporting Forms and Instructions Manual for the list of PBT Chemicals (including Dioxin and Dioxin-like Compounds)

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A. General Information

Reporting to the Toxic Chemical Release Inventory (i.e., Toxics Release Inventory (TRI)) is required by section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA, or Title III of the Superfund Amendments and Reauthorization Act of 1986), Public Law 99-499. The information contained in the Form R constitutes a “report,” and the submission of a report to the appropriate authorities constitutes “reporting.”

The Pollution Prevention Act, passed into law in October, 1990 (Pub. L. 101-508), added reporting requirements to Form R. These requirements affect all facilities required to submit Form R under section 313 of EPCRA. The data were required beginning with reports for calendar year 1991.

Reporting is required to provide the public with information on the releases and other waste management of EPCRA section 313 chemicals in their communities and to provide EPA with release and other waste management information to assist the Agency in determining the need for future regulations. Facilities must report the quantities of routine and accidental releases, and releases resulting from catastrophic or other one time events of EPCRA section 313 chemicals, as well as the maximum amount of the EPCRA section 313 chemical on-site during the calendar year and the amount contained in wastes managed on-site or transferred off-site.

A completed Form R or Form A must be submitted for each EPCRA section 313 chemical manufactured, processed, or otherwise used at each covered facility as described in the reporting rules in 40 CFR Part 372 (originally published February 16, 1988, in the Federal Register and November 30, 1994, in the Federal Register (for Form A)).

A.1 Who Must Report

Section 313 of EPCRA requires that reports be filed by owners and operators of facilities that meet all of the following criteria.

- ❑ The facility has 10 or more full-time employee equivalents (i.e., a total of 20,000 hours or greater; see 40 CFR 372.3); and
- ❑ The facility is included in Standard Industrial Classification (SIC) Codes 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169,

5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis); and

- ❑ The facility manufactures (defined to include importing), processes, or otherwise uses any EPCRA section 313 chemical in quantities greater than the established threshold in the course of a calendar year.

Executive Order 13148 extends these reporting requirements to federal facilities, regardless of their SIC code.

A.2 How to Assemble a Complete Report

A.2.a. The Toxic Chemical Release Reporting Form, EPA Form R

The five-page EPA Form R consists of two parts:

- ❑ Part I, Facility Identification Information (page 1); and
- ❑ Part II, Chemical-Specific Information (pages 2–5).

Most of the information required in Part I of Form R can be completed, photocopied, and attached to each chemical-specific report. However, Part I of each Form R submitted must have an original signature on the certification statement. In addition the trade secret designation must be entered as appropriate. Part II must be completed separately for each EPCRA section 313 chemical or chemical category. Because a complete Form R consists of at least five unique pages, any submission containing less than five unique pages is not a valid submission.

A complete report for any EPCRA section 313 chemical that is not claimed as a trade secret consists of the following completed parts:

- ❑ Part I with an original signature on the certification statement (Section 3); and
- ❑ Part II.

Staple all five pages of each report together. If you check “yes” on Part II, Section 8.11, you may attach additional information on pollution prevention activities at your facility.

A.2.b. The Alternate Threshold Form A Certification Statement

EPA Form A Certification Statement (hereafter referred to as Form A) was established in 1994. This form is based on an alternate threshold for facilities with small quantities of an EPCRA section 313 chemical released or otherwise managed as waste. The Form A serves to certify that a facility is not subject

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to Form R reporting for a specific toxic chemical. Like the Form R described above, the Form A consists of two parts, but only consists of a total of two pages.

- Part I, Facility Identification Information, which also includes the “certification” regarding the eligibility to use the Form A (page 1); and
- Part II, Chemical Identification (page 2).

Since 1998, the Form A may be used to report multiple chemicals. Four chemicals may be reported on page 2 of the form. If more than four chemicals are to be reported, additional copies of page 2 can be used to report qualifying chemicals. The Form A must have an original certification statement on page 1 and contain an appropriate trade secret designation for the form. A complete report for Form A consists of at least two pages for each submission.

A.3 Trade Secret Claims

For any EPCRA section 313 chemical whose identity is claimed as trade secret, you must submit to EPA two versions of the substantiation form as prescribed in 40 CFR Part 350, published July 29, 1988, in the Federal Register (53 FR 28772) as well as two versions of the EPCRA section 313 report. One set of reports, the “unsanitized” version, must provide the actual identity of the EPCRA section 313 chemical. The other set of reports, i.e., the “sanitized” version, must provide only a generic identity of the EPCRA section 313 chemical. If EPA deems the trade secret substantiation form valid, only the sanitized set of forms will be made available to the public.

Use the order form in this document to obtain copies of the rule and substantiation form. Further explanation of the trade secret provisions is provided in Part I, Sections 2.1 and 2.2, and Part II, Section 1.3, of the instructions.

In summary, a complete report to EPA for an EPCRA section 313 chemical claimed as a trade secret must include all of the following:

- ‘ A completed “unsanitized” version of Form R or Form A report including the EPCRA section 313 chemical identity (staple the pages together); and
- ‘ A “sanitized” version of a completed Form R or Form A report in which the EPCRA section 313 chemical identity items (Part II, Sections 1.1 and 1.2) have been left blank but in which a generic chemical name has been supplied (Part II, Section 1.3) (staple the pages together); and
- ‘ A completed “unsanitized” version of a trade secret substantiation form (staple the pages together); and

- ‘ A “sanitized” version of a completed trade secret substantiation form (staple the pages together).

Securely fasten all four reports together.

Some states also require submission of both sanitized and unsanitized reports for EPCRA section 313 chemicals whose identity is claimed as a trade secret. Others require only a sanitized version. Facilities may jeopardize the trade secret status of an EPCRA section 313 chemical by submitting an unsanitized version of the EPCRA section 313 report to a state agency or Indian tribe that does not require unsanitized forms. You may identify an individual state’s submission requirements by contacting the appropriate state-designated EPCRA section 313 contact (see Appendix F).

Where to send your trade secret submission

Please send only trade secret submissions to the P.O. box below.

To send trade secret submissions by regular mail:

EPCRA Substantiation Packages
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515

To send trade secret submissions by certified mail or overnight mail (i.e. Fed Ex, UPS, etc.):

TRI Data Processing Center
c/o Computer Sciences Corporation
Suite 300
8400 Corporate Drive
New Carrollton, MD 20785
Attention: EPCRA Substantiation Packages
301 429-5005

A.4 Recordkeeping

Sound recordkeeping practices are essential for accurate and efficient TRI reporting. It is in the facility’s interest, as well as EPA’s, to maintain records properly.

Facilities must keep a copy of each report filed for at least three years from the date of submission. These reports will be of use when completing future reports.

Facilities must also maintain those documents, calculations, worksheets, and other forms upon which they relied to gather information for prior reports. In the event of a problem with data elements on a facility’s Form R or Form A report, EPA may request documentation from the facility that supports the information reported.

EPA may conduct data quality reviews of Form R or Form A submissions. An essential component of this process involves reviewing a facility's records for accuracy and completeness. EPA recommends that facilities keep a record for those EPCRA section 313 chemicals for which they did not file EPCRA section 313 reports.

A partial list of records, organized by year, that a facility should maintain include:

- ' Previous years' EPCRA section 313 reports;
- ' EPCRA section 313 Reporting Threshold Worksheets;
- ' Engineering calculations and other notes;
- ' Purchase records from suppliers;
- ' Inventory data;
- ' EPA (NPDES) permits and monitoring reports;
- ' EPCRA section 312 Tier II Reports;
- ' Monitoring records;
- ' Flowmeter data;
- ' RCRA Hazardous Waste Generator's Report;
- ' Pretreatment reports filed by the facility with the local government;
- ' Invoices from waste management companies;
- " Manufacturer's estimates of treatment efficiencies;
- " RCRA manifests;
- " Process diagrams that indicate emissions and other releases; and
- " Records for those EPCRA section 313 chemicals for which they did not file EPCRA section 313 reports.

A.5 How to Revise or Withdraw TRI Data

U.S. EPA has received several questions relating to withdrawing and revising TRI data submitted by facilities, such as:

- What should be submitted?
- To whom should this request be sent?
- What are the reasons for revisions/withdrawals?

If you determine that you need to request a revision/withdrawal of a submission(s), EPA recommends that you use the sample letters provided below and in Appendix I of this document.

Submitting a request to EPA to revise TRI data

Facilities that filed a Form R and/or Form A Certification under EPCRA Section 313 may send their requests to revise the Form R and/or Form A Certification submission(s) in EPA's database (i.e., the Toxics Release Inventory System (TRIS)) and in the public version of the database.

In order to have a submission in the TRI database revised, EPA recommends that facilities send their request to EPA and the appropriate state agency, if required by completing a 'Request for Revision' template (provided below and in Appendix I of this document) and a copy of the Form R or Form A Certification you would like to be revised in the EPA database

to the TRI Data Processing Center. EPA will review each request and notify the requestor by letter whether or not the revision has been accepted. Note, late submissions for chemicals not reported in a previous reporting year are not considered revisions for that year. In order to effectively process the request, you should submit the following information:

- Facility name and TRI Facility Identification Number (TRIFID).
- Facility mailing address.
- Reporting year.
- Chemical name.
- Technical contact name and phone number.
- Name and phone number of the requester.
- Reason(s) for revision.
- Signature.

Facilities may request a revision for one or several reasons, such as:

- Revision of facility identification information.
- Revision of chemical identification information.
- Revision of release and other waste management activities information.
- Result of an EPA /state inspection.
- Result of notice of technical error, notice of significant error, or notice of noncompliance from EPA.
- Result of voluntary disclosure or audit policy.

Hard copy revisions may be submitted using the most recent form available, the most recent version of the *TRI-ME* software or ATRS 2001 (for reporting years after 1990). Certify and date the form on Page 1 or provide a cover letter with the software created data revision. Alternatively, you may submit a photocopy of your original submission (from your file) with the corrections made in blue ink. Re-sign and re-date the certification statement on Page 1. For revisions to 1990 and earlier reporting year submissions, you should use the paper form and write "VOLUNTARY REVISION" on page 1 of the form. For revisions to 1991 and later reporting year submissions, you should enter "X" in the space marked "Enter "X" here if this is a revision," on page 1 of the form.

Although the ATRS software has been discontinued, you may still use prior versions of it for preparing revisions for RY 2001 and previous years. The ATRS 2001 software allows you to revise your form data and submit your revisions for any reporting year after 1987. *TRI-ME* software allows you to revise your form data only for the reporting year for which the *TRI-ME* software was developed. The documentation provided with the *TRI-ME* software contains specific instructions, or you may call the ATRS and *TRI-ME* technical support hotline at 877 470-4830. The Technical Support Hotline number is to be used for ATRS and *TRI-ME* and does not provide regulatory support. If you submitted your data using software developed by a vendor, you should contact the software developer to determine if their

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software is capable of creating revisions. If not, you can use either the ATRS or *TRI-ME* software or the current hardcopy paper form. Please be careful when submitting magnetic media revisions to resubmit only the revised submissions. Do not resubmit a diskette containing all of your original submissions if you are only revising one or several of them. If you submit a diskette to EPA, do not also submit a duplicate printout of what is on the diskette because they will both be processed potentially resulting in duplicate records for your facility.

Where to Send Your Revision Request

When submitting a revision request to EPA regarding the submission(s) of your TRI Form R and/or Form A Certification, please send your request to the TRI Data Processing Center.

To send requests by regular mail:

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513
Attention: TRI Revision Request

To send requests by certified mail or overnight mail (i.e. Fed Ex, UPS, etc.):

TRI Data Processing Center
c/o Computer Sciences Corporation
Suite 300
8400 Corporate Drive
New Carrollton, MD 20785
Attention: TRI Revision Request
301 429-5005

Submitting a Request to EPA to Withdraw TRI Data

Facilities that filed a Form R and/or Form A Certification under EPCRA Section 313 may send their requests to EPA to withdraw the Form R and/or Form A Certification submission(s) from EPA's database (i.e., the Toxics Release Inventory System (TRIS)) and from the public version of the database.

In order to have a submission removed from the TRI database, EPA recommends that facilities send their request to EPA and the appropriate state agency, if required, by completing a 'Request for Withdrawal' template (provided below and in Appendix I of this document) and a copy of the Form R or Form A Certification they would like to be withdrawn from the EPA database to the TRI Data Processing Center. EPA will review each request and notify the requestor by letter whether or not the withdrawal request has been accepted. In order to effectively process the request, you should submit the following information:

- Facility name and TRI Facility Identification Number (TRIFID).
- Facility mailing address.
- Reporting year.
- Chemical name.
- Technical contact name and phone number.
- Name and phone number of the requester.
- Reason(s) for withdrawal.
- Signature.

Facilities may request a withdrawal for one or several reasons, such as:

- They manufacture, process or otherwise use less than threshold quantities. (The reporting thresholds are 25,000 pounds for manufacturing or processing and 10,000 pounds for otherwise use except for persistent bioaccumulative toxic (PBT) chemicals and chemical categories. PBT chemicals and chemical categories have reporting thresholds of 10 or 100 pounds except for the dioxin and dioxin-like compounds category that has a reporting threshold of 0.1 gram).
- Change in EPA reporting requirements for this chemical. It is no longer manufactured, processed or otherwise used above reporting thresholds or it has been deleted from the EPCRA Section 313 toxic chemical list.
- Qualify for one of the following EPCRA Section 313 exemptions:
 - < *de minimis* (Please note that *de minimis* exemption is not allowed for PBT chemicals and chemical categories).
 - < Article.
 - < Laboratory activities.
 - < Use as structural component.
 - < Coal extraction activities.
 - < Routine janitorial or facility grounds maintenance.
 - < Use for motor vehicle maintenance/operation.
 - < Personal use by employees or other persons.
 - < Chemical contained in certain intake water or intake air.
 - < Metal mining overburden.
- The chemical reported is not an EPCRA Section 313 reportable chemical.
- The chemical reported is not in a form listed on the EPCRA Section 313 toxic chemical list (i.e., aerosol, fume or dust, fibrous form, etc.).
- Activities involving the reported chemical do not meet the definition of manufacturing, processing, or otherwise use.
- Qualify for a Form A Certification submission.

Where to send your withdrawal request

When submitting a withdrawal request to EPA regarding the submission(s) of your TRI Form R and/or Form A Certification, please send your request to the TRI Data Processing Center.

To send requests by regular mail:

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513

Attention: TRI Withdrawal Request

To send requests by certified mail or overnight mail (i.e. Fed Ex, UPS, etc.):

TRI Data Processing Center
c/o Computer Sciences Corporation
Suite 300
8400 Corporate Drive
New Carrollton, MD 20785

Attention: TRI Withdrawal Request
301 429-5005

New Carrollton, MD 20785
301 429-5005

Also send a copy of the report to the state in which the facility is located. ("state" also includes: the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, Marshall Islands, the U.S. Virgin Islands, the Commonwealth of the Northern Mariana Islands, and any other territory or possession over which the U.S. has jurisdiction and Indian Country.) Refer to Appendix F for the appropriate state submission addresses.

Facilities located on Indian land should send a copy to the Chief Executive Officer of the applicable Indian tribe. Some tribes have entered into a cooperative agreement with states; in this case, report submissions should be sent to the entity designated in the cooperative agreement.

A.6 When the Report Must Be Submitted

As specified in EPCRA section 313, the report for any calendar year must be submitted on or before July 1 of the following year whether using Form R or Form A. If the reporting deadline falls on a Saturday or Sunday, EPA will accept the forms which are postmarked on the following Monday (i.e., the next business day). For example, RY2002 reports should be postmarked on or before Tuesday, July 1, 2003. Any voluntary revision to a report can be submitted anytime during the calendar year for the current or any previous reporting year. However, voluntary revisions for the current reporting year should be submitted by July 31 in order to be included in that year's public data release.

A.7 Where to Send the Forms

Submissions must be sent to both EPA and the state (or the designated official of an Indian tribe). If a report is not received by both EPA and the state (or the designated official of an Indian tribe), the submitter is considered out of compliance and subject to enforcement action. Send reports to EPA by regular mail to:

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513

Attn: Toxic Chemical Release Inventory

Certified mail, overnight mail, and hand-delivered submissions *only* should be addressed to:

TRI Data Processing Center
c/o Computer Sciences Corporation
Suite 300
8400 Corporate Drive

EPA has developed a package called "TRI Reporting Software." The easy-to-use CD-ROM includes *TRI-ME* software and comes with complete instructions for its use. It also provides prompts and messages to help you report according to EPA instructions. For copies of the CD-ROM you may call EPA at 202 564-9554. *TRI-ME* also is available for downloading from EPA's Web site at <www.epa.gov/tri>.

Private vendors offer software to assist facilities in producing magnetic media submissions or computer-generated facsimiles for EPCRA section 313 reports. Every year and upon request, EPA makes available to vendors a copy of the *Magnetic Media File Formats* document for that specific reporting year. This document provides software vendors with details describing the appropriate output file format for processing in EPA's TRI database.

However, some states may accept only paper copies of the EPCRA section 313 report. If this is the case, a magnetic media or computer-generated facsimile may be unacceptable.

A.7.a. How to Send Your Disks Containing Form R(s) and/or Form A(s)

Included in this reporting package (on the enclosed CD-ROM) is *TRI-ME*. If you choose to submit your TRI Form R(s) and/or Form A(s) on magnetic media/diskette using *TRI-ME*, please follow the instructions below.

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A.7.a.1 Labeling Your Submission Diskette

| | |
|--------------------------------------|--|
| TRIS Report | |
| Company Name | |
| Date: 6/30/2003 Report Year: 2002 | Density: HD Number: 1 of 1 |
| Contact: | Technical Contact Name 505 555-5369 |

A label should be attached to each diskette. The label may be typed or legibly handwritten. A sample label follows with the necessary information. The types of packaging and shipping used for magnetic media submissions are left to the discretion of the submitting facility. Please send completed diskettes, along with a cover letter and an original certification signature from each submitting facility to:

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513

Certified mail, overnight mail, and hand-delivered submissions *only* should be addressed to:

Attn: TRI Magnetic Media Submission
TRI Data Processing Center
c/o Computer Sciences Corporation
Suite 300
8400 Corporate Drive
New Carrollton, MD 20785
301 429-5005

If you are submitting reports on magnetic media/diskette to EPA, you must enclose a cover letter signed by the official listed in Section 3 of Part I of the Form R or Form A (name and official title of senior management official) for *each separate facility*. Cover letters for both EPA and states can be printed from *TRI-ME*. The letter on page 8 is a sample. Since you are filing by diskette, do not include duplicate paper copies of the reports that are on the diskette.

A.7.a.2 Submitting by Diskette to States

Submitters must submit a copy of each Form R or Form A to the appropriate state agency. As of the publication of this book and the TRI Reporting Software, the following states confirmed that they accept diskette submissions:

| | | | | | |
|-----------------|----|----|----|-----------------|----|
| AK | GA | LA | NH | OR | VT |
| AL | HI | MD | NJ | PA | WA |
| AZ ¹ | IA | MI | NM | SC ² | WI |
| CA | ID | MN | NV | SD | WV |
| CO | IL | MO | NY | TX | WY |
| DE | IN | MT | OH | UT | |
| FL | KS | ND | OK | VA | |

¹Arizona Emergency Response Commission accepts diskette submissions while the Arizona Dept. of Environmental Quality accepts only paper submissions. Submissions must be sent to both agencies.

²South Carolina accepts only diskette submissions.

If your state is not listed here, please contact your state office to confirm that paper submissions are required. A list of state contacts can be found in Appendix F.

A.7.b How to Submit Form R(s) and/or Form A(s) to EPA via the Internet (EPA's Central Data Exchange (CDX))

EPA encourages you to use *TRI-ME* to electronically submit your TRI submission(s) via the Internet. This year, for the first time, *TRI-ME* allows you to submit electronically to EPA without the need for mailing any paper (electronic submission is not available for trade secret forms). If you choose to submit via the Internet, do not send duplicate paper or diskette copies of the reports. Please be aware that submitting via the Internet to the U.S. EPA does not satisfy your state reporting requirements for your facility. You must report to your state separately and in the required format specified by your state (i.e., diskette, paper, etc.).

If you have any questions about the electronic submission process, call 888 890-1995 between the hours of 8:00 A.M. - 6:00 P.M. Eastern Time. For additional information about CDX, please see: <www.epa.gov/cdx/>.

A.8 How to Obtain Forms and Other Information

A copy of both forms is included in this booklet. Remove the appropriate form and produce as many photocopies as needed. Related guidance documents may be obtained from EPA's TRI Web site <www.epa.gov/tri> and EPA:

U.S. Environmental Protections Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Attn: TRI Documents
MC: 2844T
Washington, DC 20460

202 564-9554
Email: TRIDOCES@epa.gov

See "Chemical and Industry Specific Documents" section (p. ix) for the document request form and more information on available documents.

Questions about completing Form R or Form A may be directed to the EPCRA Call Center at the following address or telephone numbers.

Emergency Planning and Community
Right-to-Know Information Call Center
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., S.W. (5101)
Washington, D.C. 20460

800 424-9346 or 703 412-9810;
TDD 800 553-7672 or TDD 703 412-3323
from 9:00 a.m.– 5:00 p.m. Eastern Time
(Mon.–Fri., except Federal Holidays)

EPA Regional Staff also may be of assistance. Refer to Appendix G for a list of EPA Regional Offices.

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Sample Letter — Reporting by diskette. Send one copy to EPCRA Reporting Center and one to appropriate state agency (see Appendix F). *TRI-ME* automatically creates this letter for you if you elect to create a diskette submission.

Facility Name
Facility Address
Facility City/State/Zip Code
TRI Facility ID

Date

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513
Attn: Toxic Chemical Release Inventory
Magnetic Media Submission

To Whom It May Concern:

Enclosed please find one (1) microcomputer diskette containing toxic chemical release reporting information for:

YOUR FACILITY NAME

This information is submitted as required under section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and section 6607 of the Pollution Prevention Act of 1990.

We are submitting a total of **1** Chemical Report(s) for our facility.
These **1** chemical report(s) are described below:

| <u>Chemical Name</u> | <u>Reporting Year</u> | <u>CAS Number</u> | <u>Report Type</u> |
|----------------------|-----------------------|-------------------|--------------------|
| Zinc (fume or dust) | 2002 | 7440-66-6 | 5-page Form R |

Our technical point of contact is:

[TECHNICAL CONTACT NAME] Phone Number: 505 555-1212

and is available should any questions or problems arise in your processing of these diskettes.

If the enclosed diskette contains one or more Form R chemicals, then I hereby certify that I have reviewed the enclosed documents and that, to the best of my knowledge and belief, the submitted information is true and complete and that the amounts and values in this report(s) are accurate based on reasonable estimates using data available to the preparers of this report(s).

If the enclosed diskette contains one or more Form A chemicals, then I hereby certify that to the best of my knowledge and belief, for each toxic chemical listed in the Form A statement, the annual reportable amount as defined in 40 CFR 372.27(a) did not exceed 500 pounds for this reporting year and that the chemical was manufactured, processed or otherwise used in an amount not exceeding 1 million pounds during the reporting year.

Sincerely,

Signature

B. Facility Eligibility Determination for Submitting an EPCRA Section 313 Report

This section will help you determine whether you must submit an EPCRA section 313 report. This section discusses EPCRA section 313 reporting requirements such as the number of full-time employees, primary SIC code, and chemical activity threshold quantities. The EPCRA section 313 chemicals and chemical categories subject to reporting are listed in Table II (also see 40 CFR 372.65). (See Figure 1 for more information.)

B.1 Full-Time Employee Determination

The number of full-time “employees” is dependent only upon the total number of hours worked by all employees and other individuals (e.g., contractors) for the facility during the calendar year and not the number of persons working. Therefore, a “full-time employee,” for purposes of EPCRA section 313 reporting, is defined as 2,000 work hours per year. When making the full-time employee determination the facility must consider all paid vacation and sick leave used as hours worked by each employee. In addition, EPA interprets the hours worked by an employee to include paid holidays. To determine the number of full-time employees working for your facility, add up the hours worked by all employees during the calendar year, including contract employees and sales and support staff working for the facility, and divide the total by 2,000 hours. The result is the number of “full time employees.” In other words, if the total number of hours worked by all employees for your facility is 20,000 hours or more, your facility meets the ten employee threshold.

Examples include:

- A facility consists of 11 employees who each worked 1,500 hours for the facility in a calendar year. Consequently, the total number of hours worked by all employees for the facility during the calendar year is 16,500 hours. The number of full-time employees for this facility is equal to 16,500 hours divided by 2,000 hours per full-time employee, or 8.3 full-time employees. Therefore, even though 11 persons worked for this facility during the calendar year, the number of hours worked is equivalent to 8.3 full-time employees. This facility does not meet the employee criteria and is not subject to EPCRA section 313 reporting.
- Another facility consists of six workers and three sales staff. The six workers each worked 2,000 hours for the facility during the calendar year. The sales staff also each worked 2,000 hours during the calendar year although they may have been on the road half of the year. In addition, five contract employees were hired for a period during which each worked 400 hours for the facility. The total number of hours is equal to the time worked by the workers (12,000 hours), plus the time worked by the sales staff for the facility (6,000 hours), plus the time worked by the contract employees (2,000 hours), or 20,000 hours. Dividing the 20,000 hours by 2,000 yields 10 full-time

employees. This facility has met the full time employee criteria and may be subject to reporting if the other criteria are met.

B.2 Primary SIC Code Determination

Standard Industrial Classification (SIC) codes 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis) are covered by EPCRA section 313 and are listed in Table I. The first two digits of a 4-digit SIC code define a major business sector, while the last two digits denote a facility's specialty within the major sector. For a detailed description of 4-digit SIC codes, refer to the “Standard Industrial Classification Manual 1987.” The facility should determine its own SIC code (s), based on its activities on-site, using the SIC Manual. State agencies and other organizations may assign SIC codes on a different basis than the one used by the SIC Manual. However, for purposes of EPCRA section 313 reporting, these state assigned codes should not be used if they differ from ones assigned using the SIC Manual.

The EPCRA Call Center can assist facilities with determining which SIC codes are assigned for specific business activities as referenced in the SIC Manual. Clothbound editions of the SIC Manual are available in most major libraries or may be ordered through the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, 703 605-6000. The access number for the clothbound manual is PB87-100012, and the price is \$36.00 + shipping and handling.

The North American Industry Classification System (NAICS) is a new economic classification system that will replace the 1987 SIC code system. EPA will address the SIC code change, as it relates to EPCRA in an upcoming Federal Register notice. This upcoming change does NOT affect 2002 EPCRA section 313 reporting.

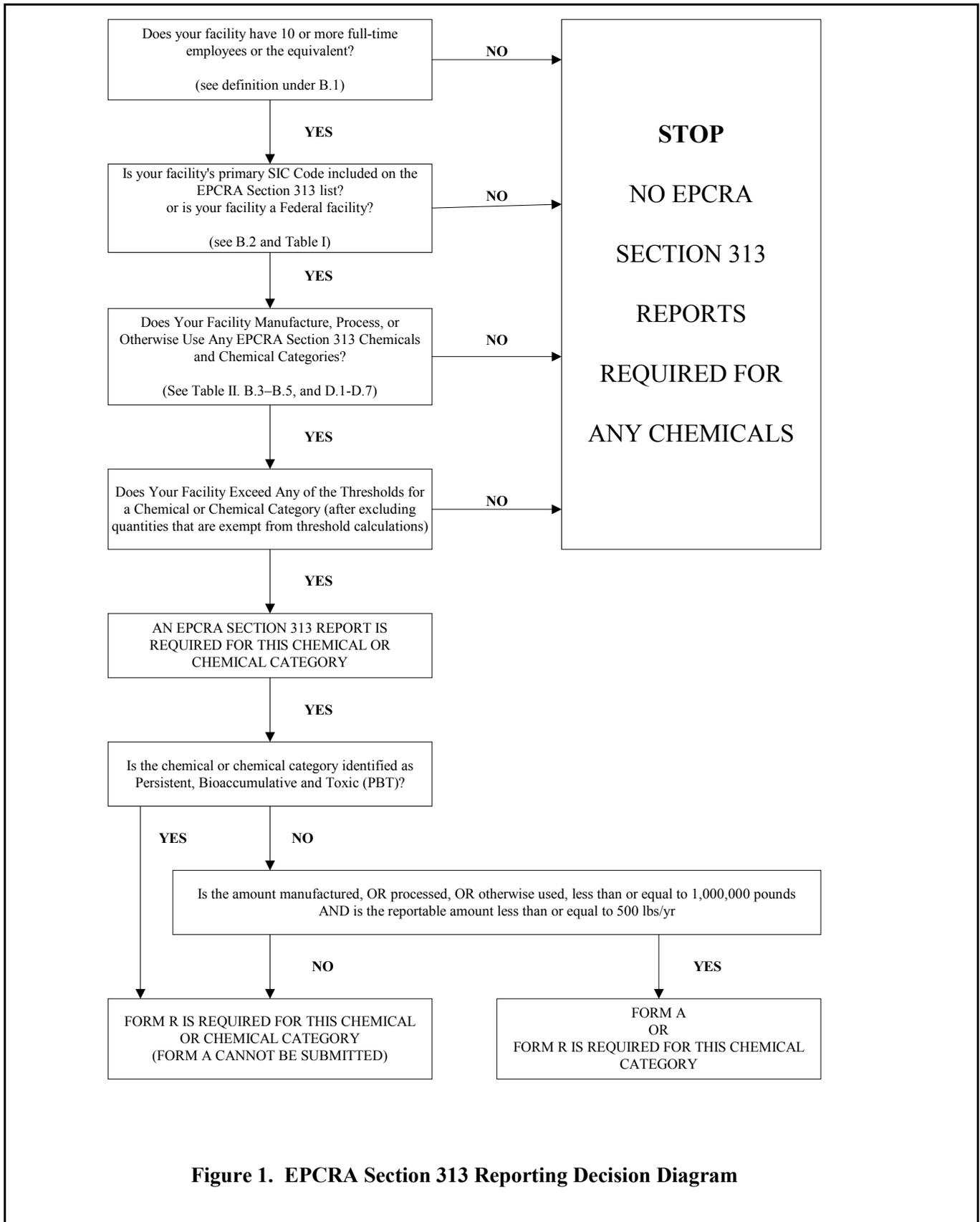


Figure 1. EPCRA Section 313 Reporting Decision Diagram

B.2.a. Multi-Establishment Facilities

Your facility may include multiple establishments that have different SIC codes. A multi-establishment facility is a facility that consists of two or more distinct and separate economic units. If your facility is a multi-establishment facility, calculate the value of the products produced, shipped, or services provided from each establishment within the facility and then use the following rule to determine if your facility meets the SIC code criterion:

If the total value of the products produced, shipped, or services provided at establishments with covered SIC codes, i.e., 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis) is greater than 50% of the value of the entire facility's products and services, the entire facility meets the SIC code criterion.

If any one establishment with a covered SIC code, i.e., 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, or 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis) has a value of services or products shipped or produced that is greater than any other establishment within the facility (40 CFR Section 372.22(b)(3)) the facility also meets the SIC code criterion.

The value of production or service attributable to a particular establishment may be isolated by subtracting the product value obtained from other establishments within the same facility from the total product or service value of the facility. This procedure eliminates the potential for “double counting” production and services in situations where establishments are engaged in sequential production or service activities at a single facility.

Examples include:

A facility in coating, engraving and allied services has two establishments. The first establishment, a general automotive repair service, is in SIC code 7537, which is not a covered SIC code. However, the second establishment, a metal paint shop is in SIC code 3479, which is a covered SIC code. The metal paint shop paints the parts received from general automotive repair service. The facility determines the product is worth \$500/unit as received from the general automotive repair service (in non covered SIC code 7537) and the value of the product is \$1500/unit after processing by the metal paint shop (in covered SIC code 3479). The value added by the metal paint shop is obtained by subtracting the value of the products from the general automotive repair service from that of the value of the products of the metal paint shop. (In this example, the value added = \$1,500/unit – \$500/unit = \$1,000/unit.) The value added (\$1,000/unit) by the establishment in SIC code 3479 is more than 50% of the product value. Therefore, the facility's primary SIC code is 3479, which is a covered SIC code.

A food processing establishment in a facility processes crops grown at the facility in a separate establishment. To determine the value of the products of each establishment the facility could first determine the value of the crops grown at the agricultural establishment, and then calculate the contribution of the food processing establishment by subtracting the crop value from the total value of the product shipped from the processing establishment (value of product shipped from processing – crop value = value of processing establishment).

A covered multi-establishment facility must make EPCRA section 313 chemical threshold determinations and, if required, must report all relevant information about releases and other waste management activities, and source reduction activities associated with an EPCRA section 313 chemical **for the entire facility**, even from establishments that are not in covered SIC codes (i.e., the covered SIC codes are 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis)). EPA realizes, however, that certain establishments in a multi-establishment facility can be, for all practical purposes, separate business units. Therefore, while threshold determinations must be made for the entire facility,

individual establishments may report releases and other waste management activities separately, provided that the total releases and other waste management quantities for the whole facility are represented by the sum of the releases and other quantities managed as waste reported by each of the separate establishments and the compliance determination is based on the entire facility.

B.2.b. Auxiliary Facilities

An auxiliary facility is one that supports another covered establishment's activities (e.g., research and development laboratories, warehouses, and storage facilities). An auxiliary facility can assume the SIC code of another covered establishment if its primary function is to service that other covered establishment's operations. For the purposes of EPCRA section 313, auxiliary facility is defined as one primarily engaged in performing support services for another covered establishment or multiple establishments of a covered facility and is in a different physical location than the primary facility. In addition, an auxiliary facility performs an integral role in the primary facility's activities. In general, an auxiliary facility's basic administrative services (paperwork, payroll, employment) are performed by the primary facility. Thus, a separate warehouse facility (i.e., one not located within the physical boundaries of a covered facility) may become a covered facility because it services a covered establishment in SIC codes 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis). Auxiliary facilities that are in these aforementioned codes are required to report if they meet the employee criterion and reporting thresholds for manufacture, process, or otherwise use.

B.2.c. Property Owners

You are not required to report if you merely own real estate on which a facility covered by this rule is located; that is, you have no other business interest in the operation of that facility (e.g., your company owns an industrial park). The operator of that facility, however, is subject to reporting requirements.

B.3 Activity Determination

B.3.a. Definitions of “Manufacture,” “Process,” and “Otherwise Use”

Manufacture: The term “*manufacture*” means to produce, prepare, compound, or import an EPCRA section 313 chemical. (See Part II, Section 3.1 of these instructions for further clarification.)

Import is defined as causing the EPCRA section 313 chemical to be imported into the customs territory of the United States. If you order an EPCRA section 313 chemical (or a mixture containing the chemical) from a foreign supplier, then you have imported the chemical when that shipment arrives at your facility directly from a source outside of the United States. By ordering the chemical, you have “caused it to be imported,” even though you may have used an import brokerage firm as an agent to obtain the EPCRA section 313 chemical.

Do Not Overlook Coincidental Manufacture

The term manufacture also includes coincidental production of an EPCRA section 313 chemical (e.g., as a byproduct or impurity) as a result of the manufacture, processing, otherwise use or disposal of another chemical or mixture of chemicals. In the case of coincidental production of an impurity (i.e., an EPCRA section 313 chemical that remains in the product that is distributed in commerce), the *de minimis* exemption, discussed in Section B.3.c of these instructions, applies. The *de minimis* exemption does not apply to byproducts (e.g., an EPCRA section 313 chemical that is separated from a process stream and further processed or disposed). Certain EPCRA section 313 chemicals may be manufactured as a result of wastewater treatment or other treatment processes. For example, neutralization of wastewater containing nitric acid can result in the coincidental manufacture of a nitrate compound (solution), reportable as a member of the nitrate compounds category.

Process: The term “*process*” means the preparation of a listed EPCRA section 313 chemical, after its manufacture, for distribution in commerce. Processing is usually the incorporation of an EPCRA section 313 chemical into a product (see Part II, Section 3.2 of these instructions for further clarification), however, a facility may process an impurity that already exists in a raw material by distributing that impurity in commerce. Processing includes preparation of the EPCRA section 313 chemicals in the same physical state or chemical form as that received by your facility, or preparation that produces a change in physical state or chemical form. The term also applies to the processing of a mixture or other trade name product (see Section B.4.b of these instructions) that contains a listed EPCRA section 313 chemical as one component.

Example 1: Coincidental Manufacture

Your company, a nitric acid manufacturer, uses aqueous ammonia in a waste treatment system to neutralize an acidic wastewater stream containing nitric acid. The reaction of ammonia and nitric acid produces a solution of ammonium nitrate. Ammonium nitrate (solution) is reportable under the nitrate compounds category and is manufactured as a byproduct. If the ammonium nitrate is produced in a quantity that exceeds the 25,000-pound manufacturing threshold, the facility must report under the nitrate compounds category.

The aqueous ammonia is considered to be otherwise used and 10% of the total aqueous ammonia would be counted towards the 10,000-pound otherwise use threshold. Reports for releases of ammonia must also include 10% of the total aqueous ammonia from the solution of ammonium nitrate (see the qualifier for the ammonia listing).

As another example, combustion of coal or other fuel in boilers/furnaces can result in the coincidental manufacture of metal category compounds and sulfuric acid (acid aerosols), hydrochloric acid (acid aerosols), and hydrogen fluoride.

Example 2: Typical Process and Manufacture Activities

Your company receives toluene, an EPCRA section 313 chemical, from another facility, and reacts the toluene with air to form benzoic acid, which the company distributes in commerce. Your company processes toluene and manufactures and processes benzoic acid. Benzoic acid, however, is not an EPCRA section 313 chemical and thus does not trigger reporting requirements.

Your facility combines toluene purchased from a supplier with various materials to form paint which it then sells. Your facility processes toluene.

Your company receives a nickel compound (nickel compounds is a listed EPCRA section 313 chemical category) as a bulk solid and performs various size-reduction operations (e.g., grinding) before packaging the compound in 50-pound bags, which the company sells. Your company processes the nickel compound.

Your company receives a prepared mixture of resin and chopped fiber to be used in the injection molding of plastic products. The resin contains a listed EPCRA section 313 chemical that becomes incorporated into the plastic, which the company distributes in commerce. Your facility processes the EPCRA section 313 chemical.

In the combustion of coal or oil, metal category compounds may be produced from either the parent metal or a metal compound contained in the coal or oil. If a metal undergoes a change of valence, a metal compound is considered to be manufactured. For example, during the combustion process copper in valence state zero changes to copper in valence state +2 in a compound such as copper (II) oxide (CuO). Furthermore, a metallic compound could be transformed to another metallic compound without a change in valency (e.g., copper (II) chloride (CuCl₂) is transformed to copper (II) oxide). The transformation to a new compound by combustion without a change in valence state is also considered to be “manufactured” for purposes of EPCRA section 313.

Otherwise Use: The term “*otherwise use*” means any use of an EPCRA section 313 chemical, including an EPCRA section 313 chemical contained in a mixture or other trade name product or waste, that is not covered by the terms “manufacture” or “process.” Otherwise use of an EPCRA section 313 chemical does not include disposal, stabilization (without subsequent distribution in commerce), or treatment for destruction unless:

(1) The EPCRA section 313 chemical that was disposed, stabilized, or treated for destruction was received from off-site for the purposes of further waste management;

or

(2) The EPCRA section 313 chemical that was disposed, stabilized, or treated for destruction was manufactured as a result of waste management activities on materials received from off-site for the purposes of waste management activities. Relabeling or redistributing of the EPCRA section 313 chemical where no repackaging of the EPCRA section 313 chemical occurs does not constitute an otherwise use or processing of the EPCRA section 313 chemical.” (See 62 FR 23846 and Part II, Section 3.3 of these instructions for further clarification).

Example 3: Typical Otherwise Use Activities

When your facility cleans equipment with toluene, you are otherwise using toluene. Your facility also separates two components of a mixture by dissolving one component in toluene, and subsequently recovers the toluene from the process for reuse or disposal. Your facility otherwise uses toluene.

A covered facility receives a waste containing 12,000 pounds of Chemical A, a non-PBT EPCRA section 313 chemical, from off-site. The facility treats the waste, destroying Chemical A and in the treatment process manufactures 10,500 pounds of Chemical B, another non-PBT EPCRA section 313 chemical. Chemical B is disposed on-site. Since the waste containing Chemical A was received from off-site for the purpose of waste management, the amount of Chemical A must be included in the otherwise use threshold determination for Chemical A. The otherwise use threshold for a non-PBT chemical is 10,000 pounds and since the amount of Chemical A exceeds this threshold, all releases and other waste management activities for Chemical A must be reported. Chemical B was manufactured in the treatment of a waste received from off-site. The facility disposed of Chemical B on-site. Since Chemical B was generated from waste received from off-site for treatment for destruction, disposal, or stabilization, the disposal of Chemical B is considered to be an otherwise use. Thus, the amount of Chemical B must be considered in the otherwise use threshold determination. Thus, the reporting threshold for Chemical B has also been exceeded and all releases and other waste management activities for Chemical B must be reported.

B.3.b. Persistent Bioaccumulative Toxic (PBT) Chemicals and Chemical Categories Overview

On October 29, 1999 EPA published a final rule (64 FR 58666) adding certain chemicals and chemical categories to the EPCRA section 313 list of toxic chemicals and lowering the reporting threshold for persistent bioaccumulative toxic (PBT) chemicals. In addition, on January 17, 2001 EPA published a final rule (66 FR 4500) that classified lead and lead compounds as PBT chemicals and lowered their reporting thresholds. The lower reporting thresholds for lead applies to all lead except when lead is contained in a stainless steel, brass or bronze alloy.

Dioxin and dioxin-like compounds, lead compounds, mercury compounds and polycyclic aromatic compounds (PACs) are the four PBT chemical categories with lower reporting thresholds. The 17 members of the dioxin and dioxin-like

compounds category and the 21 members of the PACs category are listed in Table IIc of these instructions. The dioxin and dioxin-like compounds category has the qualifier, “Manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical.”

EPA has added six individual chemicals to the EPCRA section 313 list of toxic chemicals that also had their thresholds lowered: benzo(g,h,i)perylene, benzo(j,k)fluorene (fluoranthene), 3-methylcholanthrene, octachlorostyrene, pentachlorobenzene, and tetrabromobisphenol A (TBBPA). Benzo(j,k)fluorene and 3-methylcholanthrene were added as members of the polycyclic aromatic compounds (PACs) chemical category.

EPA lowered the reporting thresholds for PBT chemicals to either 100 pounds, 10 pounds, or in the case of the dioxin and

dioxin-like compounds chemical category, to 0.1 gram. The table at the beginning of Section B.4 of these instructions lists the applicable manufacture, process, and otherwise use thresholds for the listed PBT chemical.

EPA eliminated the *de minimis* exemption for all PBT chemicals (except lead when contained in stainless steel, brass or bronze alloy). However, this action does not affect the applicability of the *de minimis* exemption to the supplier notification requirements (40 CFR Section 372.45(d)(1)).

All PBT chemicals and chemical categories (hereafter referred to as PBT chemicals) are excluded from eligibility for the alternate threshold of one million pounds. Thus the Form A cannot be used for PBT chemicals (except lead when it is in stainless steel, brass or bronze alloys when the 100 lbs threshold for lead has not been exceeded). In addition, PBT chemicals are ineligible for range reporting for on-site releases and transfers off site for further waste management. This will not affect the applicability of range reporting of the maximum amount on site as required by EPCRA section 313(g).

All releases and other waste management quantities greater than 0.1 pounds of a PBT chemical (except the dioxin and dioxin-like compounds chemical category) should be reported at a level of precision supported by the accuracy of the underlying data and estimation techniques on which the estimate is based. For quantities of 10 pounds or greater, only whole numbers are required to be reported. If a facility's release or other waste management estimates support reporting an amount that is more precise than whole numbers, then the more precise amount should be reported.

For the dioxin and dioxin-like compounds chemical category, which has a reporting threshold of 0.1 gram, facilities need only report all release and other waste management quantities greater than 100 micrograms (i.e., 0.0001 grams). Notwithstanding the numeric precision used when determining reporting eligibility thresholds, facilities should report on Form R to the level of accuracy that their data supports, up to seven digits to the right of the decimal. EPA's reporting software and data management systems support data precision to seven digits to the right of the decimal. If a facility has information on the distribution of dioxin and dioxin-like compounds, the facility must report either the distribution that best represents the distribution of the total quantity of dioxin and dioxin-like compounds released to all media, or the facility's one best media specific distribution in Part II, Section 1.4, of the Form R (40 CFR Section 372.85(b)(15)(ii)).

Lead and Lead Compounds

Beginning January 1, 2001, lead and lead compounds are classified as PBT chemicals and are subject to the lower manufacturing, processing and otherwise use threshold of 100 pounds. However, when lead is contained in stainless steel, brass, or bronze alloys it is subject to the higher 25,000 pound manufacturing and processing thresholds and the 10,000 pound otherwise use threshold. Listed below are some important guidelines to use when calculating threshold and release and other waste management quantities:

1) quantities of lead not contained in stainless steel, brass or bronze alloy are applied to both the 100 pound threshold and the 25,000/10,000 pound thresholds;

2) quantities of lead that are contained in stainless steel, brass or bronze alloys are only applied toward the 25,000/10,000 pound thresholds;

3) a facility may take the *de minimis* exemption for those quantities of lead in stainless steel, brass, or bronze alloys that meet the *de minimis* standard (e.g., manufactured as an impurity). Accordingly, the *de minimis* exemption may be considered for quantities of lead in stainless steel, brass, or bronze alloys but it may not be considered for lead not in stainless steel, brass, or bronze alloys;

4) Form A, range reporting in Sections 5 and 6 of the Form R and the use of whole numbers and 2 significant digits may not be applied to lead reporting once the lower, 100 pound threshold has been exceeded. Therefore, if a facility exceeds the 25,000/10,000 pound threshold but does not exceed the 100 pound threshold, the facility may consider Form A, range reporting in Sections 5 and 6 of the Form R, and the use of whole numbers and 2 significant digits. Once the 100 pound threshold is exceeded, however, the facility may not consider Form A, range reporting in Sections 5 and 6 of the Form R and the use of whole numbers and 2 significant digits even if the 25,000/10,000 pound threshold is also exceeded; and

5) consolidated reporting between lead and lead compounds is allowed only on Form R because Form A is never allowed when reporting lead compounds.

B.3.c. Activity Exemptions

Otherwise Use Exemptions. Certain otherwise uses of listed EPCRA section 313 chemicals are specifically exempted:

- ' Otherwise use as a structural component of the facility;
- ' Otherwise use in routine janitorial or facility grounds maintenance;

- ' Personal uses by employees or other persons;
- ' Otherwise use of products containing EPCRA section 313 chemicals for the purpose of maintaining motor vehicles operated by the facility; and
- ' Otherwise use of EPCRA section 313 chemicals contained in intake water (used for processing or non-contact cooling) or in intake air (used either as compressed air or for combustion).

The exemption of an EPCRA section 313 chemical otherwise used 1) as a structural component of the facility; or 2) in routine janitorial or facility grounds maintenance; or 3) for personal use by an employee cannot be taken for activities involving process-related equipment.

Articles Exemption. EPCRA section 313 chemicals contained in articles that are processed or otherwise used at a covered facility are exempt from threshold determinations and release and other waste management calculations. The exemption applies when the facility receives the article from another facility or when the facility produces the article itself. The exemption applies only to the quantity of EPCRA section 313 chemical present in the article. If the EPCRA section 313 chemical is manufactured (including imported), processed, or otherwise used at the covered facility other than as part of the article, in excess of an applicable threshold quantity, the facility is required to report (40 CFR Section 372.38(b)). For an EPCRA section 313 chemical in an item to be exempt as part of the article, the item must meet all the following criteria in the EPCRA section 313 article definition; that is, it must be a manufactured item (1) which is formed to a specific shape or design during manufacture, (2) which has end use functions dependent in whole or in part upon its shape or design during end use, and (3) which does not release a toxic chemical under normal conditions of processing or otherwise use of the item at the facility.

If the processing or otherwise use of all like items results in a total release of 0.5 pound or less of an EPCRA section 313 chemical in a reporting year to any environmental medium, EPA will allow this release to be rounded to zero, and the manufactured items retain their article status. The 0.5 pound threshold does not apply to each individual article, but applies to the sum of all releases from processing or otherwise use of all like articles. If all the releases of like articles over a reporting year are completely captured and recycled/reused on-site or off-site, those items retain their article status. Any amount that is released and is not recycled/reused will count toward the 0.5 pound per year cut-off value.

The articles exemption applies to the normal processing or otherwise use of articles. This exemption does not apply to the manufacture of the article. EPCRA section 313 chemicals incorporated into articles produced at a facility must be

factored into threshold determinations and release and other waste management calculations.

If, in the course of processing or otherwise use, an item retains its initial thickness or diameter, in whole or in part, it meets the first part (i.e., it must be a manufactured item which is formed to a specific shape or design during manufacture) of the article definition. If the item's basic dimensional characteristics are totally altered during processing or otherwise use, the item does not meet the first part of the definition. An example of items that do not meet the definition would be items which are cold extruded, such as lead ingots, which are formed into wire or rods. On the other hand, cutting a manufactured item into pieces which are recognizable as the article would not change the original dimensions as long as the diameter or the thickness of the item remained the same; the articles exemption would continue to apply. Metal wire may be bent and sheet metal may be cut, punched, stamped, or pressed without losing their article status as long as the diameter of the wire or tubing or the thickness of the sheet is not totally changed.

An important aspect of the articles exemption is what constitutes a release of an EPCRA section 313 chemical. Any processing or otherwise use of like articles that results in a release to the environment (of more than 0.5 pounds) negates the article status and precludes eligibility for the exemption. Cutting, grinding, melting, or other processing of manufactured items could result in a release of an EPCRA section 313 chemical during normal conditions of processing or otherwise use and therefore negate the exemption as articles.

Example 4: Articles Exemption

Nickel that is incorporated into a brass doorknob is processed to manufacture the brass doorknob, and therefore must be counted toward threshold determinations and release and other waste management calculations. However, the use of the brass doorknobs elsewhere in the facility does not have to be counted. Disposal of the brass doorknob after its use does not constitute a "release;" thus, the brass doorknob remains an article.

If an item used in the facility is fragmented, the item is still an article if those fragments being discarded remain identifiable as the article (e.g., recognizable pieces of a cylinder, pieces of wire). For instance, an eight-foot piece of wire is cut into two four-foot pieces of wire, without releasing any EPCRA section 313 chemicals. Each four-foot piece is identifiable as a piece of wire; therefore, the article status for these pieces of wire remains intact.

EPCRA section 313 chemicals received in the form of pellets are not articles because the pellet form is simply a convenient form for further processing of the material.

De Minimis Exemption. The *de minimis* exemption allows facilities to disregard certain minimal concentrations of non-PBT chemicals in mixtures or other trade name products they process or otherwise use when making threshold determinations and release and other waste management calculations. The *de minimis* exemption does not apply to the manufacture of an EPCRA section 313 chemical except if that EPCRA section 313 chemical is manufactured as an impurity and remains in the product distributed in commerce, or if the EPCRA section 313 chemical is imported below the appropriate *de minimis* level. The *de minimis* exemption does not apply to a byproduct manufactured coincidentally as a result of manufacturing, processing, otherwise use, or any waste management activities. The *de minimis* exemption does not apply to any PBT chemical (except lead when it is contained in stainless steel, brass or bronze alloy) or PBT chemical category. A list of PBT chemicals may be found in Section B.4 of these instructions.

When determining whether the *de minimis* exemption applies to an EPCRA section 313 chemical, the owner/operator must consider only the concentration of the non-PBT EPCRA section 313 chemical in mixtures and other trade name products in process streams in which the EPCRA section 313 chemical is undergoing a threshold activity. If the non-PBT EPCRA section 313 chemical in a process stream is manufactured as an impurity, imported, processed, or otherwise used and is below the appropriate *de minimis* concentration level, then the quantity of the non-PBT EPCRA section 313 chemical in that process stream does not have to be applied to threshold determinations nor included in release or other waste management determinations. If a non-PBT EPCRA section 313 chemical in a process stream is below the appropriate *de minimis* level, all releases and other waste management activities associated with the EPCRA section 313 chemical in *that* stream are exempt from EPCRA section 313 reporting. It is possible to meet an activity (e.g., processing) threshold for an EPCRA section 313 chemical on a facility-wide basis, but not be required to calculate releases or other waste management quantities associated with a particular process because that process involves only mixtures

or other trade name products containing the non-PBT EPCRA section 313 chemical below the *de minimis* level.

EPA interprets the *de minimis* exemption such that once a non-PBT EPCRA section 313 chemical concentration is at or above the appropriate *de minimis* level in the process stream threshold determinations and release and other waste management calculations must be made, even if that chemical later falls below the *de minimis* level in the same process stream. Thus, EPA considers reportable all releases and other quantities managed as waste that occur after the *de minimis* level has been met or exceeded. If an EPCRA section 313 chemical in a mixture or other trade name product at or above *de minimis* is brought on-site, the *de minimis* exemption never applies.

De minimis levels for non-PBT EPCRA section 313 chemicals and chemical categories are set at concentration levels of either 1% or 0.1%; PBT chemicals and chemical categories do not have *de minimis* levels with regard to this exemption. The 0.1% *de minimis* levels are dictated by determinations made by the National Toxicology Program (NTP) in its Annual Report on Carcinogens, the International Agency for Research and Cancer (IARC) in its Monographs, or 29 CFR part 1910, subpart Z. Therefore, once a non-PBT chemical's status under NTP, IARC, or 29 CFR part 1910, subpart Z indicates that the chemical is a carcinogen or potential carcinogen, the reporting facility may disregard levels of the chemical below the 0.1% *de minimis* concentration provided that the other criteria for the *de minimis* exemption are met. *De minimis* levels for chemical categories apply to the total concentration of all chemicals in the category within a mixture, not the concentration of each individual category member within the mixture.

De Minimis Application to the Processing or Otherwise Use of a Mixture

The *de minimis* exemption applies to the processing or otherwise use of a non-PBT EPCRA section 313 chemical in a mixture. Threshold determinations and release and other waste management calculations begin at the point where the chemical meets or exceeds the *de minimis* level. If a non-PBT EPCRA section 313 chemical is present in a mixture at a concentration below the *de minimis* level, this quantity of the substance does not have to be included for threshold determinations, release and other waste management reporting, or supplier notification requirements. The exemption will apply as long as the mixture containing *de minimis* amounts of a non-PBT EPCRA section 313 chemical never equals or goes above the *de minimis* limit.

Concentration Ranges Straddling the De Minimis Value

There may be instances in which the concentration of a non-PBT chemical is given as a range straddling the *de minimis* limit. Example 6 illustrates how the *de minimis* exemption should be applied in such a scenario.

Example 5: De Minimis Applications to Process and Otherwise Use Scenarios for Non-PBT Chemicals

There are many cases in which the *de minimis* “limit” is crossed or recrossed by non-PBT chemicals within a process or otherwise use scenario. The following examples are meant to illustrate these complex reporting scenarios.

Increasing Concentration To or Above De Minimis Levels During Processing for Non-PBT Chemicals

A manufacturing facility receives toluene that contains chlorobenzene at a concentration below its *de minimis* limit. Through distillation, the chlorobenzene content in process streams is increased over the *de minimis* concentration of 1%. From the point at which the chlorobenzene concentration equals 1% in process streams, the amount present must be factored into threshold determinations and release and other waste management estimates. The facility does not need to consider the amount of chlorobenzene in the raw material when below *de minimis* levels, i.e., prior to distillation to 1%, when making threshold determinations. The facility does not have to report emissions of chlorobenzene from storage tanks or any other equipment associated with that specific process where the chlorobenzene content is less than 1%.

Fluctuating Concentration During Processing for Non-PBT Chemicals

A manufacturer produces an ink product that contains toluene, an EPCRA section 313 chemical, below the *de minimis* level. The process used causes the percentage of toluene in the mixture to fluctuate: it rises above the *de minimis* level for a time but drops below the level as the process winds down. The facility must consider the chemical toward threshold determinations from the point at which it first equals the *de minimis* limit. Once the *de minimis* limit has been met the exemption cannot be taken.

Example 6: Concentration Ranges Straddling the De Minimis Value

A facility processes 8,000,000 pounds of a mixture containing 0.25 to 1.25% manganese. Manganese is eligible for the de minimis exemption at concentrations up to 1%. The amount of mixture subject to reporting is the quantity containing manganese at or above the de minimis concentration:

$$[(8,000,000) \times (1.25\% - 0.99\%)] \div (1.25\% - 0.25\%)$$

The average concentration of manganese that is not exempt (above the de minimis) is:

$$(1.25\% + 1.00\%) \div (2)$$

$$\left[\frac{(8,000,000) \times (1.25\% - 0.99\%)}{(1.25\% - 0.25\%)} \right] \times \left[\frac{(1.25\% + 1.00\%)}{(2)} \right] = 23,400 \text{ pounds}$$

Therefore, the amount of manganese that is subject to threshold determination and release and other waste management estimates is:

$$= 23,400 \text{ pounds manganese (which is below the processing threshold for manganese)}$$

In this scenario, because the facility's information pertaining to manganese was available to two decimal places, 0.99 was used to determine the amount below the de minimis concentrations. If the information was available to one decimal place, 0.9 should be used, as in the scenario below.

As in the previous example, manganese is present in a mixture, of which 8,000,000 pounds is processed. The MSDS states the mixture contains 0.2% to 1.2% manganese. The amount of mixture subject to reporting (at or above de minimis limit) is:

$$[(8,000,000) \times (1.2\% - 0.9\%)] \div (1.2\% - 0.2\%)$$

The average concentration of manganese that is not exempt (at or above de minimis limit) is:

$$(1.2\% + 1.0\%) \div (2)$$

Therefore, the amount of manganese that is subject to threshold determinations and release and other waste management estimates is:

$$\left[\frac{(8,000,000) \times (1.2\% - 0.9\%)}{(1.2\% - 0.2\%)} \right] \times \left[\frac{(1.2\% + 1.0\%)}{(2)} \right] = 26,400 \text{ pounds}$$

$$= 26,400 \text{ pounds manganese (which is above the processing threshold for manganese)}$$

Example 7: De Minimis Application in the Manufacture of a Toxic Chemical in a Mixture

Manufacture as a Product Impurity

Toluene-2,4-diisocyanate reacts with trace amounts of water to form trace quantities of 2,4-diaminotoluene. The resulting product contains 99% toluene-2,4-diisocyanate and 0.05% 2,4-diaminotoluene. The 2,4-diaminotoluene would not be subject to EPCRA section 313 reporting nor would supplier notification be required because the concentration of 2,4-diaminotoluene is below its *de minimis* limit of 0.1% in the product.

Manufacture as a Commercial Byproduct and Impurity

Chloroform is a reaction byproduct in the production of carbon tetrachloride. It is removed by distillation to a concentration of less than 150 ppm (0.0150%) remaining in the carbon tetrachloride. The separated chloroform at 90% concentration is sold as a byproduct. Chloroform is subject to a 0.1% (1000 ppm) *de minimis* limit. Any amount of chloroform manufactured and separated as byproduct must be included in threshold determinations because EPA does not interpret the *de minimis* exemption to apply to the manufacture of a chemical as a byproduct. Releases of chloroform prior to and during purification of the carbon tetrachloride must be reported. The *de minimis* exemption can, however, be applied to the chloroform remaining in the carbon tetrachloride as an impurity. Because the concentration of chloroform remaining in the carbon tetrachloride is below the *de minimis* limit, this quantity of chloroform is exempt from threshold determinations, release and other waste management reporting, and supplier notification.

Manufacture as a Waste Byproduct

A small amount of formaldehyde is manufactured as a reaction byproduct during the production of phthalic anhydride. The formaldehyde is separated from the phthalic anhydride as a waste gas and burned, leaving no formaldehyde in the phthalic anhydride. The amount of formaldehyde produced and removed must be included in threshold determinations and release and other waste management estimates even if the formaldehyde were present below the *de minimis* level in the process stream where it was manufactured or in the waste stream to which it was separated, because EPA does not interpret mixtures and trade name products to include wastes.

De Minimis Application in the Manufacture of the Listed Chemical in a Mixture

The *de minimis* exemption generally does not apply to the manufacturing of an EPCRA section 313 chemical. However, the *de minimis* exemption may apply to mixtures and other trade name products containing non-PBT EPCRA section 313 chemicals that are imported into the United States. (See example 5 on page 18.)

Another exception applies to non-PBT EPCRA section 313 chemicals that are manufactured as impurities that remain in the product distributed in commerce below the *de minimis* levels. The amount remaining in the product is exempt from threshold determinations. If the chemical is separated from the final product, it cannot qualify for the exemption. Any amount that is separated, or is separate, from the product, is considered a byproduct and is subject to threshold determinations and release and other waste management calculations. Any amount of an EPCRA section 313 chemical that is manufactured in a waste stream must be considered toward threshold determinations and release and other waste management calculations and accounted for on Form R even if that chemical is manufactured below the *de minimis* level.

The *de minimis* exemption also does not apply to situations where a toxic chemical in waste is diluted to below the *de minimis* level.

Laboratory Activities Exemption. EPCRA section 313 chemicals that are manufactured, processed, or otherwise used in a laboratory at a covered facility under the direct supervision of a technically qualified individual do not have to be considered for threshold determinations and release and other waste management calculations. However, pilot plant scale and specialty chemical production does not qualify for this laboratory activities exemption, nor does the use of EPCRA section 313 chemicals for laboratory support activities, such as the use of chemicals for equipment maintenance.

Coal Extraction Activities Exemption. If an EPCRA section 313 chemical is manufactured, processed, or otherwise used in extraction by facilities in SIC code 12, a person is not required to consider the quantity of the EPCRA section 313 chemical so manufactured, processed, or otherwise used when considering threshold determinations and release and other waste management calculations (See example 8). Reclamation activities occurring simultaneously with coal extraction activities (e.g., cast blasting) are included in the exemption. However, otherwise use of ash, waste rock, or fertilizer for

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reclamation purposes are not considered part of extraction; non-exempt amounts of EPCRA section 313 chemicals contained in these materials must be considered toward threshold determinations and release and other waste management calculations.

Metal Mining Overburden Exemption. If an EPCRA section 313 chemical that is a constituent of overburden is processed or otherwise used by facilities in SIC code 10, a person is not required to consider the quantity of the EPCRA section 313 chemical so processed or otherwise used when considering threshold determinations and release and other waste management calculations.

For purposes of EPCRA section 313 reporting, overburden is the unconsolidated material that overlies a deposit of useful material or ore. It does not include any portion of the ore or waste rock.

Example 8: Coal mining extraction activities

Included among these are explosives for blasting operations, solvents, lubricants, and fuels for extraction related equipment maintenance and use, as well as overburden and mineral deposits. The EPCRA section 313 chemicals contained in these materials are exempt from threshold determinations and release and other waste management calculations, when manufactured, processed or otherwise used during extraction activities at coal mines.

B.4 Threshold Determinations

EPCRA section 313 reporting is required if threshold quantities are exceeded. Separate thresholds apply to the amount of the EPCRA section 313 chemical that is manufactured, processed or otherwise used.

You must submit a report for any EPCRA section 313 chemical, which is not listed as a PBT chemical, that is manufactured or processed at your facility in excess of the following threshold:

- ' 25,000 pounds per toxic chemical or category over the calendar year.

You must submit a report for any EPCRA section 313 chemical, which is not listed as a PBT chemical, that is otherwise used at your facility in excess of the following threshold:

- ' 10,000 pounds per toxic chemical or category over the calendar year.

You must submit a report for any EPCRA section 313 chemical, which is listed as a PBT chemical, that is manufactured, processed or otherwise used at your facility above the designated threshold for that chemical.

The chemical names, CAS numbers and their reporting thresholds are listed in the table below. See Table IIc of these instructions for lists of individual members of the dioxin and dioxin-like compounds chemical category and the polycyclic aromatic compounds chemical category.

| Chemical or chemical category name | CAS number or chemical category code | Threshold (pounds, unless noted otherwise) |
|--|---|---|
| Aldrin | 309-00-2 | 100 |
| Benzo[g,h,i]perylene | 191-24-2 | 10 |
| Chlordane | 57-74-9 | 10 |
| Dioxin and dioxin-like compounds category (manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds category if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical) | N150 | 0.1 gram |
| Heptachlor | 76-44-8 | 10 |
| Hexachlorobenzene | 118-74-1 | 10 |
| Isodrin | 465-73-6 | 10 |
| Lead (this lower threshold does not apply to lead when it is contained in stainless steel, brass or bronze alloy) | 7439-92-1 | 100 |
| Lead compounds | N420 | 100 |
| Mercury | 7439-97-6 | 10 |
| Mercury compounds | N458 | 10 |
| Methoxychlor | 72-43-5 | 100 |

(table continued on next page)

| Chemical or chemical category name | CAS number or chemical category code | Threshold (pounds, unless noted otherwise) |
|---|--------------------------------------|--|
| Octachlorostyrene | 29082-74-4 | 10 |
| Pendimethalin | 40487-42-1 | 100 |
| Pentachlorobenzene | 608-93-5 | 10 |
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 10 |
| Polycyclic aromatic compounds category (PACs) | N590 | 100 |
| Tetrabromobisphenol A | 79-94-7 | 100 |
| Toxaphene | 8001-35-2 | 10 |
| Trifluralin | 1582-09-8 | 100 |

B.4.a. How to Determine if Your Facility Has Exceeded Thresholds

To determine whether your facility has exceeded an EPCRA section 313 reporting threshold, compare quantities of EPCRA section 313 chemicals that you manufacture, process, or otherwise use to the respective thresholds for those activities. A worksheet is provided in Figure 2A to assist facilities in determining whether they exceed any of the reporting thresholds for non-PBT chemicals; Figures 2B–D provide worksheets for PBT chemicals. This worksheet also provides a format for maintaining reporting facility records. Use of this worksheet is not required and the completed worksheet(s) should not accompany Form R reports submitted to EPA and the state.

Complete the appropriate worksheet for each EPCRA section 313 chemical or chemical category. (The worksheets can be found at the end of section B.4.) Base your threshold determination for EPCRA section 313 chemicals with qualifiers only on the quantity of the EPCRA section 313 chemical satisfying the qualifier.

Use of the worksheets is divided into three steps:

Step 1 allows you to record the gross amount of the EPCRA section 313 chemical or chemical category involved in activities throughout the facility. Pure forms as well as the amounts of the EPCRA section 313 chemical or chemical category present in mixtures or other trade name products must be considered. The types of activity (i.e., manufacturing, processing, or otherwise using) for which the EPCRA section 313 chemical is used must

be identified because separate thresholds apply to each of these activities. A record of the information source(s) used should be kept. Possible information sources include purchase records, inventory data, and calculations by a process engineer. The data collected in Step 1 will be totaled for each activity to identify the overall amount of the EPCRA section 313 chemical or chemical category manufactured (including imported), processed, or otherwise used.

Step 2 allows you to identify uses of the EPCRA section 313 chemical or chemical category that were included in Step 1 but are exempt under EPCRA section 313. Do not include in Step 2 exempt quantities of the EPCRA section 313 chemical not included in the calculations in Step 1. For example, if Freon contained in the building*s air conditioners was not reported in Step 1, you would not include the amount as exempt in Step 2. Step 2 is intended for use when a quantity or use of the EPCRA section 313 chemical is exempt while other quantities require reporting. Note the type of exemption for future reference. Also identify, if applicable, the fraction or percentage of the EPCRA section 313 chemical present that is exempt. Add the amounts in each activity to obtain a subtotal for exempted amounts of the EPCRA section 313 chemical or chemical categories at the facility.

Step 3 involves subtracting the result of Step 2 from the results of Step 1 for each activity. Compare this net sum to the applicable activity threshold. If the threshold is exceeded for any of the three activities, a facility must submit a Form R for that EPCRA section 313 chemical or chemical category. Do not sum quantities of the EPCRA section 313 chemical that are manufactured, processed, and otherwise used at your facility, because each of these activities requires a separate threshold determination. For example, if in a calendar year you processed 20,000 pounds of a non-PBT EPCRA section 313 chemical and you otherwise used 6,000 pounds of that same chemical, your facility has not exceeded any applicable threshold and thus is not required to report for that chemical.

Worksheets should be retained to document your determination for reporting or not reporting, but should not be submitted with the report.

You must submit a report if you exceed any threshold for any EPCRA section 313 chemical or chemical category. For example, if your facility processes 22,000 pounds of a non-PBT EPCRA section 313 chemical and also otherwise uses 16,000 pounds of that same chemical, it has exceeded the otherwise use threshold (10,000 pounds for a non-PBT chemical) and your facility must report even though it did not exceed the process threshold (25,000 pounds for a non-PBT chemical). In preparing your reports, you must consider all non-exempted activities and all releases and other waste management quantities of the EPCRA section 313 chemical from your facility, not just releases and other waste management quantities from the otherwise use activity.

Also note that threshold determinations are based upon the actual amounts of an EPCRA section 313 chemical manufactured, processed, or otherwise used over the course of the calendar year. The threshold determination may not relate to the amount of an EPCRA section 313 chemical brought on-site during the calendar year. For example, if a stockpile of 100,000 pounds of a non-PBT EPCRA section 313 chemical is present on-site but only 20,000 pounds of that chemical is applied to a process, only the 20,000 pounds processed is counted toward a threshold determination, not the entire 100,000 pounds of the stockpile.

B.4.b. Threshold Determinations for On-Site Reuse Operations

Threshold determinations of EPCRA section 313 chemicals that are reused at the facility are based only on the amount of the EPCRA section 313 chemical that is added during the year, not the total volume in the system. For example, a facility operates a refrigeration unit that contains 15,000 pounds of anhydrous ammonia at the beginning of the year. The system is charged with 2,000 pounds of anhydrous ammonia during the year. The facility has therefore “otherwise used” only 2,000 pounds of anhydrous ammonia, a non-PBT EPCRA section 313 chemical, which is below the otherwise use threshold for anhydrous ammonia and is not required to report (unless there are other “otherwise use” activities of ammonia, that when taken together, exceed the reporting threshold). If, however, the whole refrigeration unit was recharged with 15,000 pounds of anhydrous ammonia during the year, then the facility would have exceeded the otherwise use threshold, and would be required to report.

This does not apply to EPCRA section 313 chemicals “recycled” or “reused” off-site and returned to a facility. Such EPCRA section 313 chemicals returned to a facility are treated as the equivalent of newly purchased material for purposes of EPCRA section 313 threshold determinations.

B.4.c. Threshold Determinations for Ammonia

The listing for ammonia includes the modifier “includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10% of total aqueous ammonia is reportable under this listing”. The qualifier for ammonia means that anhydrous forms of ammonia are 100% reportable and aqueous forms are limited to 10% of total aqueous ammonia. Therefore, when determining threshold quantities, 100% of anhydrous ammonia is included but only 10% of total aqueous ammonia is included. If any ammonia evaporates from aqueous ammonia solutions, 100% of the evaporated ammonia is included in threshold determinations.

For example, if a facility processes aqueous ammonia it has processed 100% of the aqueous ammonia in that solution. If the ammonia remains in solution, then 10% of the total aqueous

ammonia is counted towards threshold. If there are any evaporative losses of anhydrous ammonia, then 100% of those losses must be counted towards the processing threshold. If the manufacturing, processing, or otherwise use threshold for the ammonia listing are exceeded, the facility must report 100% of these evaporative losses in Sections 5 and 8 of the Form R.

B.4.d. Threshold Determinations for Chemical Categories

A number of chemical compound categories are subject to reporting. See Table IIc for a listing of these EPCRA section 313 chemical categories. When preparing threshold determinations for one of these EPCRA section 313 chemical categories, all individual members of a category that are manufactured, processed, or otherwise used must be counted. Where generic names are used at a facility, threshold determinations should be based on CAS numbers. For example, Poly-Solv EB does not appear among the reportable chemicals in Table IIa or IIb but its CAS number indicates Poly-Solv EB is a synonym for ethylene glycol mono-n-butyl ether, a member of the certain glycol ethers chemical category (code N230). For chemical compound categories threshold determinations must be made separately for each of the three activities. Do not include in these threshold determinations for a category any chemicals that are also individually listed EPCRA section 313 chemicals (see Table IIa or IIb) or chemicals that have been deleted from a category (e.g., a class of copper phthalocyanine compounds has been deleted from the copper compounds category). Individually listed EPCRA section 313 chemicals are subject to their own, individual threshold determination.

Organic Compounds

For the organic compound categories, you are required to account for the entire weight of all compounds within a specific compound category (e.g., glycol ethers) at the facility for BOTH the threshold determination and release and other waste management estimates.

Metal Category Compounds

Threshold determinations for metal category compounds present a special case. If, for example, your facility processes several different nickel compounds, base your threshold determination on the total weight of all nickel compounds processed. However, if your facility processes both the “parent” metal (nickel) as well as one or more nickel compounds, you must make threshold determinations for both nickel (CAS number 7440-02-0) and nickel compounds (chemical category code N495) because they are separately listed EPCRA section 313 chemicals. If your facility exceeds thresholds for both the parent metal and compounds of that same metal, EPA allows you to file one combined report (e.g., one report for nickel compounds, including nickel) because the release information

you will report in connection with metal category compounds will be the total pounds of the metal released. If you file one combined report, you should put the name of the metal compound category on the Form R. In the example above, the facility that exceeded reporting thresholds for both nickel and nickel compounds chemical category, that facility could submit a single Form R for the nickel compounds chemical category, which would contain release and other waste management information for both nickel and nickel compounds. Do not put both names on the Form R.

The case of metal category compounds involving more than one metal should be noted. Some metal category compounds may contain more than one listed metal. For example, lead chromate is both a lead compound and a chromium compound. In such cases, if applicable thresholds are exceeded, you are required to file two separate reports, one for lead compounds and one for chromium compounds. Apply the total weight of the lead chromate to the threshold determinations for both lead compounds and chromium compounds. (Note: Only the amount of each parent metal released or otherwise managed as waste (not the amount of the compound), would be reported on the appropriate sections of both Form Rs. See B.5.)

Nitrate Compounds (water dissociable; reportable only when in aqueous solution)

For the category nitrate compounds (water dissociable; reportable only when in aqueous solution), the entire weight of the nitrate compound is counted in making threshold determinations. A nitrate compound is covered by this listing only when in water and only if dissociated. If no information is available on the identity of the type of nitrate that is manufactured, processed or otherwise used, assume that the nitrate compound exists as sodium nitrate.

B.4.e Threshold Determination for Persistent Bioaccumulative Toxic (PBT) Chemicals

There are two separate thresholds for EPCRA section 313 PBT chemicals; these thresholds are set based on the chemical's potential to persist and bioaccumulate in the environment. The manufacturing, processing and otherwise use thresholds for PBT chemicals is 100 pounds, while for the subset of PBTs chemicals that are highly persistent and highly toxic, it is 10 pounds. One exception is the dioxin and dioxin-like compounds chemical category—the threshold for this category is 0.1 gram. The PBT chemicals, their CAS numbers (or chemical category code), and their reporting thresholds are listed in a table in the introductory section of B.4. See Table IIc of these instructions for lists of individual members of the dioxin and dioxin-like compounds chemical category and the polycyclic aromatic compounds (PACs) chemical category.

B.4.f. Mixtures and Other Trade Name Products

EPCRA section 313 chemicals contained in mixtures and other trade name products must be factored into threshold determinations and release and other waste management calculations.

If your facility processed or otherwise used mixtures or other trade name products during the calendar year, you are required to use the best readily available data, or where such data are not readily available, reasonable estimates to determine whether the toxic chemicals in a mixture meet or exceed the *de minimis* concentration and, therefore, must be included in threshold determinations and release and other waste management calculations. If you know that a mixture or other trade name product contains a specific EPCRA section 313 chemical, combine the amount of the EPCRA section 313 chemical in the mixture or other trade name product with other amounts of the same EPCRA section 313 chemical processed or otherwise used at your facility for threshold determinations and release and other waste management calculations. If you know that a mixture contains an EPCRA section 313 chemical but it is present below the *de minimis* level, you do not have to consider the amount of the EPCRA section 313 chemical present in that mixture for purposes of threshold determinations and release and other waste management calculations. PBT chemicals are not eligible for the *de minimis* exemption except lead when it is contained in stainless steel, brass or bronze alloy.

Observe the following guidelines in estimating concentrations of EPCRA section 313 chemicals in mixtures when only limited information is available:

- ' If you only know the upper bound concentration, you must use it for threshold determinations (40 CFR section 372.30(b)(ii)).
- ' If you know the lower and upper bound concentrations of an EPCRA section 313 chemical in a mixture, EPA recommends you use the midpoint of these two concentrations for threshold determinations.
- ' If you know only the lower bound concentration, EPA recommends you subtract out the percentages of any other known components to determine a reasonable upper bound concentration, and then determine a midpoint.
- ' If you have no information other than the lower bound concentration, EPA recommends you calculate a midpoint assuming an upper bound concentration of 100%.
- ' In cases where you only have a concentration range available, EPA recommends you use the midpoint of the range extremes.

B.5 Release and Other Waste Management Determinations for Metals, Metal Category Compounds, and Nitrate Compounds

Metal Category Compounds

Although the complete weight of the metal category compounds must be used in threshold determinations for the metal compounds category, for release and other waste management determinations, only the weight of the metal portion of the metal category compound must be considered. Remember that for metal category compounds that consist of more than one metal, release and other waste management reporting must be based on the weight of each metal, provided that the appropriate thresholds have been exceeded.

Metals and Metal Category Compounds

As stated above, for compounds within the metal compound categories only the metal portion of the metal category compound must be considered in determining release and other waste management quantities for the metal category compounds. Therefore, if thresholds are separately exceeded for both the “parent” metal and its compounds, EPA allows you to file a combined Form R for the “parent” metal and its category compounds. This Form R would contain all of the release and

other waste management information for both the “parent” metal and metal portion of the related metal category compounds. For example, you exceed thresholds for chromium. You also exceed thresholds for chromium compounds. Instead of filing two Form Rs you can file one combined Form R. This Form R would contain information on quantities of chromium released or otherwise managed as waste and the quantities of the chromium portion of the chromium compounds released or otherwise managed as waste. When filing one combined Form R for an EPCRA section 313 metal and metal compound category, facilities should identify the chemical reported as the metal compound category name and code in Section 1 of the Form R. Note that this does not apply to the Form A. See the section in these instructions on the Form A. See Appendix B for more information about reporting the release and other waste management of metals and metal compounds.

Nitrate Compounds (water dissociable; reportable only in aqueous solution)

Although the complete weight of the nitrate compound must be used for threshold determinations for the nitrate compounds category, for release and other waste management calculations only the nitrate portion of the compound should be reported.

Example 9: Mixtures and Other Trade Name Products

Scenario #1: Your facility otherwise uses 12,000 pounds of an industrial solvent (Solvent X) for equipment cleaning. The Material Safety Data Sheet (MSDS) for the solvent indicates that it contains at least 50% methyl ethyl ketone (MEK), an EPCRA section 313 chemical; however, it also states that the solvent contains 20% non-hazardous surfactants. This is the only MEK-containing mixture used at the facility.

EPA recommends you follow these steps to determine if the quantity of the EPCRA section 313 chemical in solvent X exceeds the threshold for otherwise use.

- 1) Determine a reasonable maximum concentration for the EPCRA section 313 chemical by subtracting out the non-hazardous surfactants (i.e., $100\% - 20\% = 80\%$).
- 2) Determine the midpoint between the known minimum (50%) and the reasonable maximum calculated above (i.e., $(80\% + 50\%)/2 = 65\%$).
- 3) Multiply total weight of Solvent X otherwise used by 65% (0.65).
 $12,000 \text{ pounds} \times 0.65 = 7,800 \text{ pounds}$
- 4) Because the total amount of MEK otherwise used at the facility was less than the 10,000-pound otherwise use threshold, the facility is not required to file a Form R for MEK.

Scenario #2: Your facility otherwise used 15,000 pounds of Solvent Y to clean printed circuit boards. The MSDS for the solvent lists only that Solvent Y contains at least 80% of an EPCRA section 313 chemical that is only identified as chlorinated hydrocarbons.

EPA recommends you follow these steps to determine if the quantity of the EPCRA section 313 chemical in the solvent exceeds the threshold for otherwise use.

- 1) Because the specific chemical is unknown, the Form R will be filed for “chlorinated hydrocarbons.” This name will be entered into Part II, Section 2.1, “Mixture Component Identity.” (Note: Because your supplier is claiming the EPCRA section 313 chemical identity a trade secret, you do not have to file substantiation forms.)
- 2) The upper bound limit is assumed to be 100% and the lower bound limit is known to be 80%. Using this information, the specific concentration is estimated to be 90% (i.e., the mid-point between upper and lower limits).
 $(100\% + 80\%)/2 = 90\%$
- 3) The total weight of Solvent Y is multiplied by 90% (0.90) when calculating for thresholds.
 $15,000 \times 0.90 = 13,500$
- 4) Because the total amount of chlorinated hydrocarbons exceeds the 10,000-pound otherwise use threshold, you must file a Form R for this chemical.

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Figure 2A. EPCRA Section 313 Non-PBT Chemical Reporting Threshold Worksheet¹

Facility Name: _____
 EPCRA Section 313 Chemical or Chemical Category: _____
 CAS Registry Number: _____
 Reporting Year: _____

Date Worksheet Prepared: _____
 Prepared By: _____

Amounts of the EPCRA Section 313 chemical or chemical category manufactured, processed, or otherwise used.

| Mixture Name or Other Identifier | Information Source | Total Weight (lb) | Percent EPCRA Section 313 Chemical by Weight | EPCRA Section 313 Chemical Weight (lb) | Amount of the EPCRA Section 313 Chemical or Chemical Category by Activity (lb.): | | |
|----------------------------------|--------------------|-------------------|--|--|--|--------------|----------------|
| | | | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| Subtotal: | | | | | (A) _____ lb | (B) _____ lb | (C) _____ lb |

Exempt quantity of the EPCRA Section 313 chemical or chemical category that should be excluded.

| Mixture Name as Listed Above | Applicable Exemption (<i>de minimis</i> , articles, facility, activity) | Fraction or Percent Exempt (if Applicable) | Amount of the EPCRA Section 313 Chemical Exempt from Above (lb): | | |
|------------------------------|--|--|--|----------------------------|----------------------------|
| | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| Subtotal: | | | (A ₁) _____ lb | (B ₁) _____ lb | (C ₁) _____ lb |

Amount subject to threshold: (A-A₁) _____ lb (B-B₁) _____ lb (C-C₁) _____ lb

Compare to threshold for EPCRA section 313 reporting. 25,000 lbs 25,000 lbs 10,000 lbs

If any threshold is exceeded, reporting is required for all activities. Do not submit this worksheet with Form R or Form A; retain it for your records.

¹ Note: Chemicals listed as PBT have separate thresholds (dioxin and dioxin-like compounds chemical category = 0.1 g; highly persistent, highly bioaccumulative toxic chemicals = 10 lbs; all other PBT chemicals = 100 lbs). Make certain you are using the appropriate worksheet for the toxic chemical of concern.

Figure 2B. EPCRA Section 313 Reporting Threshold Worksheet for PBT Chemicals with 100 Pound Thresholds

Facility Name: _____
 EPCRA Section 313 Chemical or Chemical Category: _____
 CAS Registry Number: _____
 Reporting Year: _____

Date Worksheet Prepared: _____
 Prepared By: _____

Amounts of the EPCRA Section 313 chemical or chemical category manufactured, processed, or otherwise used.

| Mixture Name or Other Identifier | Information Source | Total Weight (lb) | Percent EPCRA Section 313 Chemical by Weight | EPCRA Section 313 Chemical Weight (lb) | Amount of the EPCRA Section 313 Chemical or Chemical Category by Activity (lb.): | | |
|----------------------------------|--------------------|-------------------|--|--|--|--------------|----------------|
| | | | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| Subtotal: | | | | | (A) _____ lb | (B) _____ lb | (C) _____ lb |

Exempt quantity of the EPCRA Section 313 chemical or chemical category that should be excluded.

| Mixture Name as Listed Above | Applicable Exemption (articles, facility, activity) ¹ | Fraction or Percent Exempt (if Applicable) | Amount of the EPCRA Section 313 Chemical Exempt from Above (lb): | | |
|------------------------------|--|--|--|----------------------------|----------------------------|
| | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| Subtotal: | | | (A ₁) _____ lb | (B ₁) _____ lb | (C ₁) _____ lb |

Amount subject to threshold: (A-A₁) _____ lb (B-B₁) _____ lb (C-C₁) _____ lb

Compare to threshold for EPCRA section 313 reporting. 100 lbs 100 lbs 100 lbs

If any threshold is exceeded, reporting is required for all activities. Do not submit this worksheet with Form R; retain it for your records.

¹ Note: Chemicals listed as PBT are not eligible for the *de minimis* exemption.

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Figure 2C. EPCRA Section 313 Reporting Threshold Worksheet for PBT Chemicals with 10 Pound Thresholds

Facility Name: _____
 EPCRA Section 313 Chemical or Chemical Category: _____
 CAS Registry Number: _____
 Reporting Year: _____

Date Worksheet Prepared: _____
 Prepared By: _____

Amounts of the EPCRA Section 313 chemical or chemical category manufactured, processed, or otherwise used.

| Mixture Name or Other Identifier | Information Source | Total Weight (lb) | Percent EPCRA Section 313 Chemical by Weight | EPCRA Section 313 Chemical Weight (lb) | Amount of the EPCRA Section 313 Chemical or Chemical Category by Activity (lb.): | | |
|----------------------------------|--------------------|-------------------|--|--|--|--------------|----------------|
| | | | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| Subtotal: | | | | | (A) _____ lb | (B) _____ lb | (C) _____ lb |

Exempt quantity of the EPCRA Section 313 chemical or chemical category that should be excluded.

| Mixture Name as Listed Above | Applicable Exemption (articles, facility, activity) ¹ | Fraction or Percent Exempt (if Applicable) | Amount of the EPCRA Section 313 Chemical Exempt from Above (lb): | | |
|------------------------------|--|--|--|----------------------------|----------------------------|
| | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| Subtotal: | | | (A ₁) _____ lb | (B ₁) _____ lb | (C ₁) _____ lb |

Amount subject to threshold: (A-A₁) _____ lb (B-B₁) _____ lb (C-C₁) _____ lb

Compare to threshold for EPCRA section 313 reporting. 10 lbs 10 lbs 10 lbs

If any threshold is exceeded, reporting is required for all activities. Do not submit this worksheet with Form R; retain it for your records.

¹ Note: Chemicals listed as PBT are not eligible for the *de minimis* exemption.

Figure 2D. EPCRA Section 313 Reporting Threshold Worksheet for Dioxin and Dioxin-Like Compounds Chemical Category

Facility Name: _____
 EPCRA Section 313 Chemical or Chemical Category: Dioxin and Dioxin-Like Compounds
 Chemical Category Code: N150
 Reporting Year: _____

Date Worksheet Prepared: _____
 Prepared By: _____

Amounts of the EPCRA Section 313 chemical or chemical category manufactured, processed, or otherwise used.

| Mixture Name or Other Identifier | Information Source | Total Weight (g) | Percent EPCRA Section 313 Chemical by Weight | EPCRA Section 313 Chemical Weight (g) | Amount of the EPCRA Section 313 Chemical or Chemical Category by Activity (g.): | | |
|----------------------------------|--------------------|------------------|--|---------------------------------------|---|-----------|----------------|
| | | | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| Subtotal: | | | | | (A)_____g | (B)_____g | (C)_____g |

Exempt quantity of the EPCRA Section 313 chemical or chemical category that should be excluded.

| Mixture Name as Listed Above | Applicable Exemption (articles, facility, activity) ¹ | Fraction or Percent Exempt (if Applicable) | Amount of the EPCRA Section 313 Chemical Exempt from Above (g): | | |
|------------------------------|--|--|---|-------------------------|-------------------------|
| | | | Manufactured | Processed | Otherwise Used |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| Subtotal: | | | (A ₁)_____g | (B ₁)_____g | (C ₁)_____g |

Amount subject to threshold: (A-A₁)_____g (B-B₁)_____g (C-C₁)_____g

Compare to threshold for EPCRA section 313 reporting. 0.1 gram 0.1 gram 0.1 gram

If any threshold is exceeded, reporting is required for all activities. Do not submit this worksheet with Form R; retain it for your records.

¹ Note: Chemicals listed as PBT are not eligible for the *de minimis* exemption.

C. Instructions for Completing EPA Form R

Part I. Facility Identification Information

Section 1. Reporting Year

This is the calendar year to which the reported information applies, not the year in which you are submitting the report. Information for the 2002 reporting year must be submitted on or before July 1, 2003.

Section 2. Trade Secret Information

2.1 Are you claiming the EPCRA section 313 chemical identified on page 2 a trade secret?

Answer this question only after you have completed the rest of the report. The specific identity of the EPCRA section 313 chemical being reported in Part II, Section 1, may be designated as a trade secret. If you are making a trade secret claim, mark “yes” and proceed to Section 2.2. Only check “yes” if you manufacture, process, or otherwise use the EPCRA section 313 chemical whose identity is a trade secret. (See page 2 of these instructions for specific information on trade secrecy claims.) If you checked “no,” proceed to Section 3; do not answer Section 2.2.

3 Do not submit trade secret reports electronically or on diskette.

2.2 If “yes” in 2.1, is this copy sanitized or unsanitized?

Answer this question only after you have completed the rest of the report. Check “sanitized” if this copy of the report is the public version that does not contain the EPCRA section 313 chemical identity but does contain a generic name in its place, and you have claimed the EPCRA section 313 chemical identity trade secret in Part I, Section 2.1. Otherwise, check “unsanitized.”

Section 3. Certification

The certification statement must be signed by a senior official with management responsibility for the person (or persons) completing the form. A senior management official must certify the accuracy and completeness of the information reported on the form by signing and dating the certification statement. Each report must contain an original signature. You should print or type in the space provided the name and title of the person who signs the statement. This certification statement applies to all the information supplied on the form and should be signed only after the form has been completed.

Section 4. Facility Identification

4.1 Facility Name, Location, and TRI Facility Identification Number

Enter the full name that the facility presents to the public and its customers in doing business (e.g., the name that appears on invoices, signs, and other official business documents). Do not use a nickname for the facility (e.g., Main Street Plant) unless that is the legal name of the facility under which it does business. Also enter the street address, mailing address, city, county, state, and zip code in the space provided. Do not use a post office box number as the street address. The street address provided must be the location where the EPCRA section 313 chemicals are manufactured, processed, or otherwise used. If your mailing address and street address are the same, you should enter NA in the space for the mailing address.

If your facility is not in a county, put the name of your city, district (for example, District of Columbia), or parish (if you are in Louisiana) in the county block of the Form R and Form A as well as in the county field of *TRI-ME*. “NA” or “None” are not acceptable entries.

If you have submitted a Form R or Form A for previous reporting years, a TRI Facility Identification Number has been assigned to your facility. If you know your TRI Facility Identification Number, you should complete Section 4. If you do not know your TRI Facility Identification Number, you should contact the EPCRA Call Center (see page 7). If your facility has moved, do not enter your TRI Facility Identification Number, enter “New Facility.” If you are filing a separate Form R for each establishment at your facility, you should use the same TRI Facility Identification Number for each establishment.

The TRI Facility Identification Number is established by the first Form R submitted by a facility at a particular location. This identification number is retained by the facility even if the facility changes name, ownership, production processes, SIC codes, etc. This identification number will stay with this location. If a new facility moves to this location it should use this TRI Facility Identification Number. Establishments of a facility that report separately should use the TRI Facility Identification Number of the facility.

You should enter “New Facility” in the space for the TRI Facility Identification number if this is your first submission of a Form R.

4.2 Full or Partial Facility Indication

EPCRA section 313 requires reports by “facilities,” which are defined as “all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled

by, or under common control with such person). A facility may contain more than one establishment.”

EPCRA section 313 defines establishment as “an economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed.” Under section 372.30(c) of the reporting rule, you may submit a separate Form R for each establishment, or for groups of establishments in your facility, provided all releases and other waste management activities and source reduction activities involving the EPCRA section 313 chemical from the entire facility are reported. This allows you the option of reporting separately on the activities involving an EPCRA section 313 chemical at each establishment, or group of establishments (e.g., part of a covered facility), rather than submitting a single Form R for that EPCRA section 313 chemical for the entire facility. However, if an establishment or group of establishments does not manufacture, process, or otherwise use or release or otherwise manage as waste an EPCRA section 313 chemical, you do not have to submit a report for that establishment or group of establishments for that particular chemical. (See also Section B.2.a of these instructions.)

A covered facility must report all releases and other waste management activities and source reduction activities of an EPCRA section 313 chemical if the facility meets a reporting threshold for that EPCRA section 313 chemical. However, if the facility is composed of several distinct establishments, EPA allows these establishments to submit separate reports for the EPCRA section 313 chemical as long as all releases and other waste management activities of the EPCRA section 313 chemical from the entire facility are accounted for. Whether submitting a report for the entire facility or separate reports for the establishments, the threshold determination must be made based on the entire facility. Indicate in Section 4.2 whether your report is for the entire covered facility as a whole or for part of a covered facility (i.e., one or more establishments).

Federal facilities and contractors at federal facilities (GOCOs—Government-owned, contractor-operated facilities) should check either 4.2c or 4.2d, but not both. Federal facilities should check 4.2c, even if their TRI reports contain release and other waste management information from contractors located at the facility. Contractors at federal facilities, which are required by EPCRA section 313 to file TRI reports independently of the federal facility, should check 4.2d. This information is important to prevent duplication of federal facility data. (See Appendix A for further guidance on these instructions.)

4.3 Technical Contact

Enter the name and telephone number (including area code) of a technical representative whom EPA or state officials may contact for clarification of the information reported on Form R.

Beginning in the 2002 reporting year you should also enter an email address for this person. If the technical contact does not have an email address you should enter NA. This contact person does not have to be the same person who prepares the report or signs the certification statement and does not necessarily need to be someone at the location of the reporting facility. However, this person should be familiar with the details of the report so that he or she can answer questions about the information provided.

4.4 Public Contact

Enter the name and telephone number (including area code) of a person who can respond to questions from the public about the report. If you choose to designate the same person as both the technical and the public contact, you may enter “Same as Section 4.3” in this space. This contact person does not have to be the same person who prepares the report or signs the certification statement and does not necessarily need to be someone at the location of the reporting facility. If your facility does not have a public contact, provide the technical contact name and telephone number in the public contact name and telephone number fields.

4.5 Standard Industrial Classification (SIC) Code

Enter the appropriate four-digit Standard Industrial Classification (SIC) Code that is the primary SIC Code for your facility in Section 4.5(a). Enter any other applicable SIC Codes for your facility in 4.5 (b)–(f). Table I lists the SIC codes within 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvent recovery services on a contract or fee basis). If the report covers more than one establishment, enter the primary 4-digit SIC code for each establishment starting with the primary SIC code for the entire facility. You are required to enter SIC codes only for those establishments within the facility that fall within SIC codes 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis). If you do not know your SIC code, consult

the 1987 SIC Manual (see Section B.2 of these instructions for ordering information).

The North American Industry Classification System (NAICS) is a new economic classification system that will replace the 1987 SIC code system. EPA will address the SIC code change, as it relates to EPCRA, in an upcoming Federal Register notice. This upcoming change does NOT affect the 2002 EPCRA section 313 reporting.

4.6 Latitude and Longitude

Enter the latitude and longitude coordinates of your facility. Sources of these data include EPA permits (e.g., NPDES permits), county property records, facility blueprints, and site plans. Starting with reporting year 2002 you can determine the latitude and longitude of your facility using a siting tool found on the TRI home page. For information on the siting tool and instructions on how to determine these coordinates see Appendix E. Enter only numerical data. Do not preface numbers with letters such as N or W to denote the hemisphere.

Latitude and longitude coordinates of your facility are very important for pinpointing the location of reporting facilities and are required elements on the Form R. EPA encourages facilities to make the best possible measurements when determining latitude and longitude. Please check to make sure the latitude and longitude coordinates of your facility are correct. For the continental United States readings should be within 24°23'58" and 49°22'16" latitude, and 66°53'06" and 124°50'55" longitude. For Alaska readings should be within 51°10'30" and 71°26'04" latitude, and 129°59'29" and 187°39'08" longitude. For Hawaii readings should be within 18°51'56" and 28°30'59" latitude, and 154°45'21" and 178°26'25" longitude. As with any other data field, missing, suspect, or incorrect data may generate an error notice in the Facility Data Profile to be issued to the facility. (See Appendix C)

4.7 Dun & Bradstreet Number(s)

Enter the nine-digit number assigned by Dun & Bradstreet (D & B) for your facility or each establishment within your facility. These numbers code the facility for financial purposes. This number may be available from your facility's treasurer or financial officer. You can also obtain the numbers from your local Dun & Bradstreet office (check the telephone book White Pages). If a facility does not subscribe to the D & B service, a number can be obtained, toll free at 800 234-3867 (8:00 AM to 6:00 PM, Local Time) or on the Web at <www.dnb.com>. If none of your establishments has been assigned a D & B number, you should enter NA in box (a). If only some of your establishments have been assigned D & B numbers, enter those numbers in Part I, section 4.7.

4.8 EPA Identification Number(s)

The EPA Identification Number is a 12-character number assigned to facilities covered by hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA). Facilities not covered by RCRA Subtitle C are not likely to have an assigned identification number. If your facility is not required to have an identification number, you should enter NA in box (a). If your facility has been assigned EPA Identification Numbers, you must enter those numbers in the spaces provided in Section 4.8.

4.9 NPDES Permit Number(s)

Enter the numbers of any permits your facility holds under the National Pollutant Discharge Elimination System (NPDES) even if the permit(s) do not pertain to the EPCRA section 313 chemical being reported. This nine-character permit number is assigned to your facility by EPA or the state under the authority of the Clean Water Act. If your facility does not have a permit, you should enter NA in Section 4.9a.

4.10 Underground Injection Well Code (UIC) Identification Number(s)

If your facility has a permit to inject a waste that contains or contained the EPCRA section 313 chemical into Class 1 deep wells, enter the 12-digit Underground Injection Well Code (UIC) identification number assigned by EPA or by the state under the authority of the Safe Drinking Water Act. If your facility does not hold such a permit(s), you should enter NA in Section 4.10a. You are required to provide the UIC number for wells that receive the EPCRA section 313 chemical being reported in the current reporting year.

Section 5. Parent Company Information

You must provide information on your parent company. For purposes of Form R, a parent company is defined as the highest level company, located in the United States, that directly owns at least 50% of the voting stock of your company. If your facility is owned by a foreign entity, enter NA in this space. Corporate names should be treated as parent company names for companies with multiple facility sites. For example, the Bestchem Corporation is not owned or controlled by any other corporation but has sites throughout the country whose names begin with Bestchem. In this case, Bestchem Corporation should be listed as the parent company. Note that a facility that is a 50:50 joint venture is its own parent company. When a facility is owned by more than one company and there is no parent company for the entire facility (meaning that none of the facility owners directly owns at least 50 percent of the voting stock of the facility at issue), the facility should provide the name of the parent company of either the facility operator or the owner with the largest ownership interest in the facility. If neither the

operator nor this owner has a parent company, then the NA box should be checked.

5.1 Name of Parent Company

Enter the name of the corporation or other business entity that is your ultimate U.S. parent company. If your facility has no parent company, you should check the NA box.

5.2 Parent Company's Dun & Bradstreet Number

Enter the D & B number for your ultimate U.S. parent company, if applicable. The number may be obtained from the treasurer or financial officer of the company. If your parent company does not have a D & B number, you should check the NA box.

Part II. Chemical Specific Information

In Part II, you are to report on:

- The EPCRA section 313 chemical being reported;
- The general uses and activities involving the EPCRA section 313 chemical at your facility;
- On-site releases of the EPCRA section 313 chemical from the facility to air, water, and land;
- Quantities of the EPCRA section 313 chemical transferred to off-site locations;
- Information for on-site and off-site disposal, treatment, energy recovery, and recycling of the EPCRA section 313 chemical; and
- Source reduction activities.

Section 1. EPCRA Section 313 Chemical Identity

1.1 CAS Number

Enter the Chemical Abstracts Service (CAS) registry number in Section 1.1 exactly as it appears in Table II of these instructions for the chemical being reported. CAS numbers are cross-referenced with an alphabetical list of chemical names in Table II. If you are reporting one of the EPCRA section 313 chemical categories (e.g., chromium compounds), you should enter the applicable category code in the CAS number space. EPCRA section 313 chemical category codes are listed below and can also be found in Table IIc and Appendix B.

EPCRA section 313 Chemical Category Codes

| | |
|------|--|
| N010 | Antimony compounds |
| N020 | Arsenic compounds |
| N040 | Barium compounds |
| N050 | Beryllium compounds |
| N078 | Cadmium compounds |
| N084 | Chlorophenols |
| N090 | Chromium compounds |
| N096 | Cobalt compounds |
| N100 | Copper compounds |
| N106 | Cyanide compounds |
| N120 | Diisocyanates |
| N150 | Dioxin and dioxin-like compounds |
| N171 | Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) |
| N230 | Certain glycol ethers |
| N420 | Lead compounds |
| N450 | Manganese compounds |
| N458 | Mercury compounds |
| N495 | Nickel compounds |
| N503 | Nicotine and salts |
| N511 | Nitrate compounds (water dissociable, reportable only in aqueous solution) |
| N575 | Polybrominated biphenyls (PBBs) |

| | |
|------|--------------------------------------|
| N583 | Polychlorinated alkanes (C10 to C13) |
| N590 | Polycyclic aromatic compounds (PACs) |
| N725 | Selenium compounds |
| N740 | Silver compounds |
| N746 | Strychnine and salts |
| N760 | Thallium compounds |
| N770 | Vanadium compounds |
| N874 | Warfarin and salts |
| N982 | Zinc compounds |

If you are making a trade secret claim, you must report the CAS number or should report the category code on your unsanitized Form R and unsanitized substantiation form. Do not include the CAS number or category code on your sanitized Form R or sanitized substantiation form.

1.2 EPCRA Section 313 Chemical or Chemical Category Name

Enter the name of the EPCRA section 313 chemical or chemical category exactly as it appears in Table II. If the EPCRA section 313 chemical name is followed by a synonym in parentheses, report the chemical by the name that directly follows the CAS number (i.e., not the synonym). If the EPCRA section 313 chemical identity is actually a product trade name (e.g., Dicofol), the 9th *Collective Index* name is listed below it in brackets. You may report either name in this case.

Do not list the name of a chemical that does not appear in Table II, such as individual members of an EPCRA section 313 chemical category. For example, if you use silver chloride, **do not** report silver chloride with its CAS number. Report this chemical as “silver compounds” with its category code, N740.

If you are making a trade secret claim, you must report the specific EPCRA section 313 chemical identity on your unsanitized Form R and unsanitized substantiation form. Do not report the name of the EPCRA section 313 chemical on your sanitized Form R or sanitized substantiation form. Include a generic name in Part II, Section 1.3 of your sanitized Form R report.

EPA requests that the EPCRA section 313 chemical, chemical category, or generic name also be placed in the box marked “Toxic Chemical, Category, or Generic Name” in the upper right-hand corner on all pages of Form R. While this space is not a required data element, providing this information will help you in preparing a complete Form R report.

1.3 Generic Chemical Name

Complete Section 1.3 only if you are claiming the specific EPCRA section 313 chemical identity of the EPCRA section 313 chemical as a trade secret and have marked the trade secret block in Part I, Section 2.1 on page 1 of Form R. Enter a generic chemical name that is descriptive of the chemical structure. You should limit the generic name to seventy characters (e.g., numbers, letters, spaces, punctuation) or less. Do not enter mixture names in Section 1.3; see Section 2 below.

In-house plant codes and other substitute names that are not structurally descriptive of the EPCRA section 313 chemical identity being withheld as a trade secret are not acceptable as a generic name. The generic name must appear on both sanitized and unsanitized Form Rs, and the name must be the same as that used on your substantiation forms.

1.4 Distribution of Each Member of the Dioxin and Dioxin-like Compounds Category

Report a distribution of the chemicals included in the dioxin and dioxin-like compounds category. Such distribution shall either represent the distribution of the total quantity of dioxin and dioxin-like compounds **released** to all media from your facility; or your facility's one best media-specific distribution. When reporting dioxin and dioxin-like compounds, if there are any numbers in boxes 1-17, then every field must be filled in with either 0 or some number between 0.01 and 100. Distribution should be reported in percentages and the total should equal 100%. If you do not have speciation data available, you should indicate NA. If you are not reporting for dioxin and dioxin-like compounds, leave the entire section blank.

You should not report the quantity of dioxin and dioxin-like compounds released or otherwise managed as waste in Section 1.4. Quantities released or otherwise managed as waste must be reported in Sections 5, 6 and 8.

There are 17 individual chemicals listed in the dioxin and dioxin-like compounds category. Each of these chemicals are assigned a number from 1 to 17. These numbers correspond to the boxes in Section 1.4. The individual chemicals in the dioxin and dioxin-like compounds category and their number are in the matrix below:

| | | |
|---|------------|---------------------------------------|
| 1 | 67562-39-4 | 1,2,3,4,6,7,8-Heptachlorodibenzofuran |
| 2 | 55673-89-7 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran |
| 3 | 70648-26-9 | 1,2,3,4,7,8-Hexachlorodibenzofuran |
| 4 | 57117-44-9 | 1,2,3,6,7,8-Hexachlorodibenzofuran |
| 5 | 72918-21-9 | 1,2,3,7,8,9-Hexachlorodibenzofuran |
| 6 | 60851-34-5 | 2,3,4,6,7,8-Hexachlorodibenzofuran |

| | | |
|----|------------|---|
| 7 | 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzo- p-dioxin |
| 8 | 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo- p-dioxin |
| 9 | 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo- p-dioxin |
| 10 | 35822-46-9 | 1,2,3,4,6,7,8-Heptachlorodibenzo- p-dioxin |
| 11 | 39001-02-0 | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran |
| 12 | 03268-87-9 | 1,2,3,4,6,7,8,9-Octachlorodibenzo- p-dioxin |
| 13 | 57117-41-6 | 1,2,3,7,8-Pentachlorodibenzofuran |
| 14 | 57117-31-4 | 2,3,4,7,8-Pentachlorodibenzofuran |
| 15 | 40321-76-4 | 1,2,3,7,8-Pentachlorodibenzo- p-dioxin |
| 16 | 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran |
| 17 | 01746-01-6 | 2,3,7,8-Tetrachlorodibenzo- p-dioxin |

Section 2. Mixture Component Identity

Do not complete this section if you have completed Section 1 of Part II. Report the generic name provided to you by your supplier in this section if your supplier is claiming the chemical identity proprietary or trade secret. Do not answer "yes" in Part I, Section 2.1 on page 1 of the form if you complete this section. You do not need to supply trade secret substantiation forms for this EPCRA section 313 chemical because it is your supplier who is claiming the chemical identity a trade secret.

Example 10: Mixture Containing Unidentified EPCRA Section 313 Chemical

Your facility uses 20,000 pounds of a solvent that your supplier has told you contains 80% "chlorinated aromatic," their generic name for a non-PBT EPCRA section 313 chemical subject to reporting under EPCRA section 313. You, therefore, have used 16,000 pounds of some EPCRA section 313 chemical and that exceeds the "otherwise use" threshold for a non-PBT chemical. You would file a Form R and enter the name "chlorinated aromatic" in the space provided in Part II, Section 2.

2.1 Generic Chemical Name Provided by Supplier

Enter the generic chemical name in this section only if the following three conditions apply:

1. You determine that the mixture contains an EPCRA section 313 chemical but the only identity you have for that chemical is a generic name;

2. You know either the specific concentration of that EPCRA section 313 chemical component or a maximum or average concentration level; and
3. You multiply the concentration level by the total annual amount of the whole mixture processed or otherwise used and determine that you meet the process or otherwise use threshold for that single, generically identified mixture component.

Section 3. Activities and Uses of the EPCRA Section 313 Chemical at the Facility

Indicate whether the EPCRA section 313 chemical is manufactured (including imported), processed, or otherwise used at the facility and the general nature of such activities and uses at the facility during the calendar year (see figure 3). You are not required to report on Form R the quantity manufactured, processed or otherwise used. Report activities that take place only at your facility, not activities that take place at other facilities involving your products. You must check all the boxes in this section that apply. Refer to the definitions of “manufacture,” “process,” and “otherwise use” in the general information section of these instructions or Part 40, Section 372.3 of the *Code of Federal Regulations* for additional explanations.

3.1 Manufacture the EPCRA Section 313 Chemical

Persons who manufacture (including import) the EPCRA section 313 chemical must check at least one of the following:

- a. **Produce** — The EPCRA section 313 chemical is produced at the facility.
- b. **Import** — The EPCRA section 313 chemical is imported by the facility into the Customs Territory of the United States. (See Section B.3.a of these instructions for further clarification of import.)

And check at least one of the following:

- c. **For on-site use/processing** — The EPCRA section 313 chemical is produced or imported and then further processed or otherwise used at the same facility. If you check this block, generally you should also check at least one item in Part II, Section 3.2 or 3.3.
- d. **For sale/distribution** — The EPCRA section 313 chemical is produced or imported specifically for sale or distribution outside the manufacturing facility.
- e. **As a byproduct** — The EPCRA section 313 chemical is produced coincidentally during the manufacture, processing, or otherwise use of another chemical substance or mixture and, following its production, is separated from that other chemical substance or mixture.

EPCRA section 313 chemicals produced as a result of waste management are also considered byproducts.

- f. **As an impurity** — The EPCRA section 313 chemical is produced coincidentally as a result of the manufacture, processing, or otherwise use of another chemical but is not separated and remains in the mixture or other trade name product with that other chemical.

In summary, if you are a manufacturer of the EPCRA section 313 chemical, you must check (a) and/or (b), and at least one of (c), (d), (e), and (f) in Section 3.1.

3.2 Process the EPCRA Section 313 Chemical

Persons who process the EPCRA section 313 chemical must check at least one of the following:

- a. **As a reactant** — A natural or synthetic EPCRA section 313 chemical is used in chemical reactions for the manufacture of another chemical substance or of a product. Includes but is not limited to, feedstocks, raw materials, intermediates, and initiators.
- b. **As a formulation component** — An EPCRA section 313 chemical is added to a product (or product mixture) prior to further distribution of the product that acts as a performance enhancer during use of the product. Examples of EPCRA section 313 chemicals used in this capacity include, but are not limited to, additives, dyes, reaction diluents, initiators, solvents, inhibitors, emulsifiers, surfactants, lubricants, flame retardants, and rheological modifiers.
- c. **As an article component** — An EPCRA section 313 chemical becomes an integral component of an article distributed for industrial, trade, or consumer use. One example is the pigment components of paint applied to a chair that is sold.
- d. **Repackaging** — This consists of processing or preparation of an EPCRA section 313 chemical (or product mixture) for distribution in commerce in a different form, state, or quantity. This includes, but is not limited to, the transfer of material from a bulk container, such as a tank truck to smaller containers such as cans or bottles.
- e. **As an impurity** — The EPCRA section 313 chemical is processed but is not separated and remains in the mixture or other trade name product with that/those other chemical(s).

Example 11: Manufacturing and Processing Activities of EPCRA Section 313 Chemicals

In the two examples below, it is assumed that the threshold quantities for manufacture, process, or otherwise use (25,000 pounds, 25,000 pounds, and 10,000 pounds, respectively for non-PBT chemicals; 100 pounds for certain PBT chemicals; 10 pounds for highly persistent, highly bioaccumulative toxic chemicals; and 0.1 grams for the PBT chemical category comprised of dioxin and dioxin-like compounds) have been exceeded and the reporting of EPCRA section 313 chemicals is therefore required.

1. Your facility manufactures diazomethane. Fifty percent is sold as a product, thus it is processed. The remaining 50% is reacted with alpha-naphthylamine, forming N-methyl-alpha-naphthylamine and also producing nitrogen gas.

Your company manufactures diazomethane, an EPCRA section 313 chemical, both for sale/ distribution as a commercial product and for on-site use/processing as a feedstock in the N-methyl-alpha-naphthylamine production process. Because the diazomethane is a reactant, it is also processed. See Figure 3 for how this information would be reported in Part II, Section 3 of Form R.

Your facility also processes alpha-naphthylamine, as a reactant to produce N-methyl-alpha-naphthylamine, a chemical not on the EPCRA section 313 list.

2. Your facility is a commercial distributor of Missouri bituminous coal, which contains mercury at 1.5 ppm (w:w). You should check the box on the Form R at Part II, Section 3.2.e for processing mercury as an impurity.

3.3 Otherwise Use the EPCRA Section 313 Chemical (non-incorporative activities)

Persons who otherwise use the EPCRA section 313 chemical must check at least one of the following:

- a. **As a chemical processing aid** — An EPCRA section 313 chemical that is added to a reaction mixture to aid in the manufacture or synthesis of another chemical substance but is not intended to remain in or become part of the product or product mixture is otherwise used as chemical processing aid. Examples of such EPCRA section 313 chemicals include, but are not limited to, process solvents, catalysts, inhibitors, initiators, reaction terminators, and solution buffers.
- b. **As a manufacturing aid** — An EPCRA section 313 chemical that aids the manufacturing process but does not become part of the resulting product and is not added to the reaction mixture during the manufacture or synthesis of another chemical substance is otherwise used as a manufacturing aid. Examples include, but are not limited to, process lubricants, metalworking fluids, coolants, refrigerants, and hydraulic fluids.
- c. **Ancillary or other use** — An EPCRA section 313 chemical is used at a facility for purposes other than aiding chemical processing or manufacturing as described above is otherwise used as ancillary or other use. Examples include, but are not limited to, cleaners, degreasers, lubricants, fuels, EPCRA section 313 chemicals used for treating wastes, and EPCRA section 313 chemicals used to treat water at the facility.

Section 4. Maximum Amount of the EPCRA Section 313 Chemical On-site at Any Time During the Calendar Year

For data element 4.1 of Part II, insert the code (see codes below) that indicates the maximum quantity of the EPCRA section 313 chemical (e.g., in storage tanks, process vessels, on-site shipping containers, or in wastes generated) at your facility at any time during the calendar year. If the EPCRA section 313 chemical was present at several locations within your facility, use the maximum total amount present at the entire facility at any one time. While range reporting is not allowed for PBT chemicals elsewhere on the Form R, range reporting for PBT chemicals is allowed for Maximum Amount On Site.

Figure 3. Hypothetical Sections 1, 2 and 3 of Part II of the Form R.

| | | | | | | | | | | | | | | | | | |
|--|--|---|---|--------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| SECTION 1. TOXIC CHEMICAL IDENTITY | | (Important: DO NOT complete this section if you completed Section 2 below.) | | | | | | | | | | | | | | | |
| 1.1 | CAS Number (Important: Enter only one number exactly as it appears on the Section 313 list. Enter category code if reporting a chemical category.) 334-88-3 | | | | | | | | | | | | | | | | |
| 1.2 | Toxic Chemical or Chemical Category Name (Important: Enter only one name exactly as it appears on the Section 313 list.) Diazomethane | | | | | | | | | | | | | | | | |
| 1.3 | Generic Chemical Name (Important: Complete only if Part 1, Section 2.1 is checked "yes". Generic Name must be structurally descriptive.) | | | | | | | | | | | | | | | | |
| 1.4 Distribution of Each Member of the Dioxin and Dioxin-like Compounds Category. (If there are any numbers in boxes 1-17, then every field must be filled in with either 0 or some number between 0.01 and 100. Distribution should be reported in percentages and the total should equal 0 or 100%. If you do not have speciation data available, check NA.) | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| NA | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| SECTION 2. MIXTURE COMPONENT IDENTITY | | (Important: DO NOT complete this section if you completed Section 1 above.) | | | | | | | | | | | | | | | |
| 2.1 | Generic Chemical Name Provided by Supplier (Important: Maximum of 70 characters, including numbers, letters, spaces, and punctuation.) | | | | | | | | | | | | | | | | |
| SECTION 3. ACTIVITIES AND USES OF THE TOXIC CHEMICAL AT THE FACILITY (Important: Check all that apply.) | | | | | | | | | | | | | | | | | |
| 3.1 | Manufacture the toxic chemical: | 3.2 | Process the toxic chemical: | 3.3 | Otherwise use the toxic chemical: | | | | | | | | | | | | |
| a. | <input checked="" type="checkbox"/> Produce | b. | <input type="checkbox"/> Import | a. | <input type="checkbox"/> As a chemical processing aid | | | | | | | | | | | | |
| If produce or import: | | | | b. | <input type="checkbox"/> As a manufacturing aid | | | | | | | | | | | | |
| c. | <input checked="" type="checkbox"/> For on-site use/processing | a. | <input checked="" type="checkbox"/> As a reactant | c. | <input type="checkbox"/> Ancillary or other use | | | | | | | | | | | | |
| d. | <input checked="" type="checkbox"/> For sale/distribution | b. | <input type="checkbox"/> As a formulation component | | | | | | | | | | | | | | |
| e. | <input type="checkbox"/> As a byproduct | c. | <input type="checkbox"/> As an article component | | | | | | | | | | | | | | |
| f. | <input type="checkbox"/> As an impurity | d. | <input type="checkbox"/> Repackaging | | | | | | | | | | | | | | |
| | | e. | <input type="checkbox"/> As an impurity | | | | | | | | | | | | | | |

Weight Range in Pounds

| Range Code | From... | To... |
|------------|-------------|---------------------|
| 01 | 0 | 99 |
| 02 | 100 | 999 |
| 03 | 1,000 | 9,999 |
| 04 | 10,000 | 99,999 |
| 05 | 100,000 | 999,999 |
| 06 | 1,000,000 | 9,999,999 |
| 07 | 10,000,000 | 49,999,999 |
| 08 | 50,000,000 | 99,999,999 |
| 09 | 100,000,000 | 499,999,999 |
| 10 | 500,000,000 | 999,999,999 |
| 11 | 1 billion | more than 1 billion |

Do not include the weight of the entire mixture or other trade name product. These data may be found in the Tier II form your facility may have prepared under Section 312 of EPCRA. See Part 40, Section 372.30(b) of the *Code of Federal Regulations* for further information on how to calculate the weight of the EPCRA section 313 chemical in the mixture or other trade name product. For EPCRA section 313 chemical categories (e.g., nickel compounds), include all chemical compounds in the category when calculating the maximum amount, using the entire weight of each compound. When reporting for dioxin and dioxin-like compounds you should convert the maximum amount from grams to pounds before choosing the appropriate range code in Section 4 of Part II.

If the EPCRA section 313 chemical present at your facility was part of a mixture or other trade name product, determine the maximum quantity of the EPCRA section 313 chemical present at the facility by calculating the weight percent of the EPCRA section 313 chemical only.

Section 5. Quantity of the EPCRA Section 313 Chemical Entering Each Environmental Medium On-site

In Section 5, you must account for the total aggregate on-site releases of the EPCRA section 313 chemical to the environment from your facility for the calendar year.

On-site releases to the environment include emissions to the air, discharges to surface waters, and releases to land and underground injection wells.

For all toxic chemicals (except the dioxin and dioxin-like compound category), do not enter the values in Section 5 in gallons, tons, liters, or any measure other than pounds. You must also enter the values as whole numbers (do not use scientific notation). Numbers following a decimal point are not acceptable for toxic chemicals other than those designated as PBT chemicals. For PBT chemicals, facilities should report release and other waste management quantities greater than 0.1 pound (except the dioxin and dioxin-like compounds category) provided the accuracy and the underlying data on which the estimate is based supports this level of precision. For the dioxin and dioxin-like compounds category, facilities should report at a level of precision supported by the accuracy of the underlying data and the estimation techniques on which the estimate is based. For the dioxin and dioxin-like compounds chemical category, which has a reporting threshold of 0.1 gram, facilities need only report all release and other waste management quantities greater than 100 micrograms (i.e., 0.0001 grams). (See example 12). Notwithstanding the numeric precision used when determining reporting eligibility thresholds, facilities should report on Form R to the level of accuracy that their data supports, up to seven digits to the right of the decimal. EPA's reporting software and data management systems support data precision up to seven digits to the right of the decimal.

Example 12: Reporting Dioxins and Dioxin-Like Compounds

If the total quantity for Section 5.2 of the Form R (i.e., stack or point air emissions) is 0.00005 grams or less, then zero can be entered. If the total quantity is between 0.00005 and 0.0001 grams then 0.0001 grams can be entered or the actual number can be entered (e.g., 0.000075).

NA vs. a Numeric Value (e.g., Zero). Generally, NA is applicable if the waste stream that contains or contained the EPCRA section 313 chemical is not directed to the relevant environmental medium, or if leaks, spills and fugitive emissions cannot occur. If the waste stream that contains or

contained the EPCRA section 313 chemical is directed to the environmental medium, or if leaks, spills or fugitive emissions can occur, NA should not be used, even if treatment or emission controls result in a release of zero. If the annual aggregate release of that chemical was equal to or less than 0.5 pound, the value reported is zero (unless the chemical is a listed PBT chemical).

For Section 5.1, NA generally is not applicable for volatile organic compounds (VOCs). For Section 5.5.4, NA generally would not be applicable, recognizing the possibility of accidental spills or leaks of the EPCRA section 313 chemical.

An example that illustrates the use of NA vs. a numeric value (e.g., zero) would be nitric acid involved in a facility's processing activities. If the facility neutralizes the wastes containing nitric acid to a pH of 6 or above, then the facility reports a release of zero for the EPCRA section 313 chemical, not NA. Another example is when the facility has no underground injection well, in which case NA should be entered in Part I, Section 4.10 and checked in Part II, Section 5.4.1 and 5.4.2 of Form R. Also, if the facility does not landfill the acidic waste, NA should be checked in Part II, Section 5.5.1.B of Form R.

All releases of the EPCRA section 313 chemical to the air must be classified as either stack or fugitive emissions, and included in the total quantity reported for these releases in Sections 5.1 and 5.2. Instructions for columns A, B, and C follow the discussions of Sections 5.1 through 5.5.

5.1 Fugitive or Non-Point Air Emissions

Report the total of all releases of the EPCRA section 313 chemical to the air that are not released through stacks, vents, ducts, pipes, or any other confined air stream. You must include (1) fugitive equipment leaks from valves, pump seals, flanges, compressors, sampling connections, open-ended lines, etc.; (2) evaporative losses from surface impoundments and spills; (3) releases from building ventilation systems; and (4) any other fugitive or non-point air emissions. Engineering estimates and mass balance calculations (using purchase records, inventories, engineering knowledge or process specifications of the quantity of the EPCRA section 313 chemical entering product, hazardous waste manifests, or monitoring records) may be useful in estimating fugitive emissions. You should check the NA box in Section 5.1 if you do not engage in activities that result in fugitive or non-point air emissions of this listed toxic chemical. For VOCs, NA generally would not be applicable.

5.2 Stack or Point Air Emissions

Report the total of all releases of the EPCRA section 313 chemical to the air that occur through stacks, confined vents, ducts, pipes, or other confined air streams. You must include storage tank emissions. Air releases from air pollution

control equipment would generally fall in this category. Monitoring data, engineering estimates, and mass balance calculations may help you to complete this section. You should check the NA box in Section 5.2 if there are no stack air activities involving the waste stream that contains or contained the EPCRA section 313 chemical.

5.3 Discharges to Receiving Streams or Water Bodies

In Section 5.3 you are to enter all the names of the streams or water bodies to which your facility directly discharges the EPCRA section 313 chemical on which you are reporting. A total of three spaces is provided on page 2 of Form R. Enter the name of each receiving stream or surface water body to which the EPCRA section 313 chemical being reported is directly discharged. Report the name of the receiving stream or water body as it appears on the permit for the facility. If the stream is not included in the NPDES permit or its name is not identified in the NPDES permit, enter the name of the off-site stream or water body by which it is publicly known or enter the first publicly named water body to which the receiving waters are a tributary, if the receiving waters are unnamed. Do not list a series of streams through which the EPCRA section 313 chemical flows. Be sure to include all the receiving streams or water bodies that receive stormwater runoff from your facility. Do not enter names of streams to which off-site treatment plants discharge. You should enter NA in Section 5.3.1 if there are no discharges to receiving streams or water bodies of the waste stream that contains or contained the EPCRA section 313 chemical (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 5).

Enter the total annual amount of the EPCRA section 313 chemical released from all discharge points at the facility to each receiving stream or water body. Include process outfalls such as pipes and open trenches, releases from on-site wastewater treatment systems, and the contribution from stormwater runoff, if applicable (see instructions for column C below). Do not include discharges to a POTW or other off-site wastewater treatment facilities in this section. These off-site transfers must be reported in Part II, Section 6 of Form R. Wastewater analyses and flowmeter data may provide the quantities you will need to complete this section.

Discharges of listed acids (e.g., hydrogen fluoride, nitric acid) may be reported as zero if the discharges have been neutralized to pH 6 or above. If wastewater containing a listed acid is discharged below pH 6, then releases of the acid must be reported. In this case, pH measurements may be used to estimate the amount of mineral acid released.

5.4.1 Underground Injection On-Site to Class I Wells

Enter the total amount of the EPCRA section 313 chemical that was injected into Class I wells at the facility. Chemical analyses, injection rate meters, and RCRA Hazardous Waste Generator Reports are good sources for obtaining data that will be useful in completing this section. You should check the NA box in Section 5.4.1 if you do not inject the waste stream that contains or contained the EPCRA section 313 chemical into Class I underground wells (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 5).

5.4.2 Underground Injection On-site to Class II–V Wells

Enter the total amount of the EPCRA section 313 chemical that was injected into wells at the facility other than Class I wells. Chemical analyses and injection rate meters are good sources for obtaining data that will be useful in completing this section. You should check the NA box in Section 5.4.2 if you do not inject the waste stream that contains or contained the EPCRA section 313 chemical into Class II–V underground wells (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 5).

5.5 Disposal to Land On-site

Five predefined subcategories for reporting quantities released to land within the boundaries of the facility are provided. Do not report land disposal at off-site locations in this section. Accident histories and spill records may be useful (e.g., release notification reports required under section 304 of EPCRA, section 103 of CERCLA, and accident histories required under section 112(r)(7)(B)(ii) of the Clean Air Act). Where relevant, you should check the NA box in sections 5.5.1A through 5.5.3 if there are no disposal activities for the waste stream that contains or contained the EPCRA section 313 chemical (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 5). For 5.5.4, facilities generally should report zero, recognizing the potential for spills or leaks.

5.5.1A RCRA Subtitle C landfills—Enter the total amount of the EPCRA section 313 chemical that was placed in RCRA Subtitle C landfills. EPA has not required facilities to estimate leaks from landfills because the amount of the EPCRA section 313 chemical has already been reported as a release.

5.5.1B Other landfills—Enter the total amount of the EPCRA section 313 chemical that was placed in landfills other than RCRA Subtitle C landfills. EPA has not required facilities to estimate leaks from landfills because the amount of the EPCRA section 313 chemical has already been reported as a release.

5.5.2 Land treatment/application farming — Land treatment is a disposal method in which a waste containing an EPCRA section 313 chemical is applied onto or incorporated into soil. While this disposal method is considered a release to land, any volatilization of EPCRA section 313 chemicals into the air occurring during the disposal operation must not be included in this section but must be included in the total fugitive air releases reported in Part II, Section 5.1 of Form R.

5.5.3 Surface impoundment — A surface impoundment is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although some may be lined with man-made materials), that is designed to hold an accumulation of liquid wastes or wastes containing free liquids. Examples of surface impoundments are holding, settling, storage, and elevation pits; ponds, and lagoons. If the pit, pond, or lagoon is intended for storage or holding without discharge, it would be considered to be a surface impoundment used as a final disposal method. A facility must determine, to the best of its ability, the percentage of a volatile chemical, e.g., benzene, that is in waste sent to a surface impoundment that evaporates during the reporting year. The facility must report this as a fugitive air emission in section 5.1. The balance should be reported in section 5.5.3.

Quantities of the EPCRA section 313 chemical released to surface impoundments that are used merely as part of a wastewater treatment process generally should not be reported in this section. However, if an impoundment accumulates sludges containing the EPCRA section 313 chemical, you must include an estimate in this section unless the sludges are removed and otherwise disposed (in which case they must be reported under the appropriate section of the form). For the purposes of this reporting, storage tanks are not considered to be a type of disposal and are not to be reported in this section of Form R.

5.5.4 Other Disposal — Includes any amount of an EPCRA section 313 chemical released to land that does not fit the categories of landfills, land treatment, or surface impoundment. This other disposal would include any spills or leaks of EPCRA section 313 chemicals to land. For example, 2,000 pounds of benzene leaks from an underground pipeline into the land at a facility. Because the pipe was only a few feet from the surface at the erupt point, 30% of the benzene evaporates into the air. The 600 pounds released to the air would be reported as a fugitive air release (Part II, Section 5.1) and the remaining 1,400 pounds would be reported as a release to land, other disposal (Part II, Section 5.5.4).

Column A: Total Release

Only on-site releases of the EPCRA section 313 chemical to the environment for the calendar year are to be reported in this section of Form R. The total on-site releases from your facility do not include transfers or shipments of the EPCRA section 313 chemical from your facility for sale or distribution in commerce, or of wastes to other facilities for disposal, treatment, energy recovery, or recycling (see Part II, Section 6 of these Instructions). Both routine releases, such as fugitive air emissions, and accidental or non-routine releases, such as chemical spills, must be included in your estimate of the quantity released.

Releases of Less Than 1,000 Pounds. For total annual releases or off-site transfers of an EPCRA section 313 chemical from the facility of less than 1,000 pounds, the amount may be reported either as an estimate or by using the range codes that have been developed (range reporting in section 5 **does not** apply to PBT chemicals). The reporting range codes to be used are:

| <u>Code</u> | <u>Range (pounds)</u> |
|-------------|-----------------------|
| A | 1–10 |
| B | 11–499 |
| C | 500–999 |

Do not enter a range code and an estimate in the same box in column A. Total annual on-site releases of an EPCRA section 313 chemical from the facility of less than 1 pound may be reported in one of several ways. You should round the value to the nearest pound. If the estimate is greater than 0.5 pound, you should either enter the range code “A” for “1–10” or enter “1” in column A. If the release is equal to or less than 0.5 pound, you may round to zero and enter “0” in column A.

Note that total annual releases of 0.5 pound or less from the processing or otherwise use of an article maintain the article status of that item. Thus, if the only releases you have are from processing an article, and such releases are equal to or less than 0.5 pound per year, you are not required to submit a report for that EPCRA section 313 chemical. The 0.5-pound release determination does not apply to just a single article. It applies to the cumulative releases from the processing or otherwise use of the same type of article (e.g., sheet metal or plastic film) that occurs over the course of the reporting year.

Releases of 1,000 Pounds or More. For releases to any medium that amount to 1,000 pounds or more for the year, you must provide an estimate in pounds per year in column A. Any estimate provided in column A need not be reported to more than two significant figures. This estimate should be in whole numbers. Do not use decimal points.

Calculating On-Site Releases. To provide the release information in column A EPCRA section 313(g)(2) requires a facility to use readily available data (including monitoring data) collected pursuant to other provisions of law, or, where such data are not readily available, “reasonable estimates” of the amounts involved. If available data (including monitoring data) are known to be nonrepresentative, facilities must make reasonable estimates using the best readily available information.

Reasonable estimates of the amounts released should be made using published emission factors, material balance calculations, or engineering calculations. You may not use emission factors or calculations to estimate releases if more accurate data are available.

No additional monitoring or measurement of the quantities or concentrations of any EPCRA section 313 chemical released into the environment, or of the frequency of such releases, beyond that required under other provisions of law or regulation or as part of routine plant operations, is required for the purpose of completing Form R.

You must estimate the quantity (in pounds) of the EPCRA section 313 chemical or chemical category that is released annually to each environmental medium on-site. Include only the quantity of the EPCRA section 313 chemical in this estimate. If the EPCRA section 313 chemical present at your facility was part of a mixture or other trade name product, calculate only the releases of the EPCRA section 313 chemical, not the other components of the mixture or other trade name product. If you are only able to estimate the releases of the mixture or other trade name product as a whole, you should assume that the release of the EPCRA section 313 chemical is proportional to its concentration in the mixture or other trade name product. See Part 40, Section 372.30(b) of the *Code of Federal Regulations* for further information on how to calculate the concentration and weight of the EPCRA section 313 chemical in the mixture or other trade name product.

If you are reporting an EPCRA section 313 chemical category listed in Table II of these instructions rather than a specific EPCRA section 313 chemical, you must combine the release data for all chemicals in the EPCRA section 313 chemical category (e.g., all listed members of certain glycol ethers or all listed members of chlorophenols) and report the aggregate amount for that EPCRA section 313 chemical in that category separately. For example, if your facility releases 3,000 pounds per year of 2-chlorophenol, 4,000 pounds per year of 3-chlorophenol, and 4,000 pounds per year of 4-chlorophenol to air as fugitive emissions, you must report that your facility releases 11,000 pounds per year of chlorophenols to air as fugitive emissions in Part II, Section 5.1.

For aqueous ammonia solutions, releases must be reported based on 10% of total aqueous ammonia. Ammonia

evaporating from aqueous ammonia solutions is considered to be anhydrous ammonia; therefore, 100% of the anhydrous ammonia should be reported if it is released to the environment. For dissociable nitrate compounds, release estimates should be based on the weight of the nitrate only.

For metal category compounds (e.g., chromium compounds), report releases of only the parent metal. For example, a user of various inorganic chromium salts would report the total chromium released regardless of the chemical compound and exclude any contribution to mass made by the other portion of the compound.

Column B: Basis of Estimate

For each release estimate, you are required to indicate the principal method used to determine the amount of release reported. You should enter a letter code that identifies the method that applies to the largest portion of the total estimated release quantity.

The codes are as follows:

- M— Estimate is based on monitoring data or measurements for the EPCRA section 313 chemical.
- C— Estimate is based on mass balance calculations, such as calculation of the amount of the EPCRA section 313 chemical in wastes entering and leaving process equipment.
- E— Estimate is based on published emission factors, such as those relating release quantity to through-put or equipment type (e.g., air emission factors).
- O— Estimate is based on other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgment. This would include applying an estimated removal efficiency to a treatment, even if the composition of the waste before treatment was fully identified through monitoring data.

For example, if 40% of stack emissions of the reported EPCRA section 313 chemical were derived using monitoring data, 30% by mass balance, and 30% by emission factors, you should enter the code letter “M” for monitoring.

If the monitoring data, mass balance, or emission factor used to estimate the release is not specific to the EPCRA section 313 chemical being reported, the form should identify the estimate as based on engineering calculations or best engineering judgment (O).

If a mass balance calculation yields the flow rate of a waste, but the quantity of reported EPCRA section 313 chemical in the waste is based on solubility data, you should report “O”

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because “engineering calculations” were used as the basis of estimate of the quantity of the EPCRA section 313 chemical in the waste.

If the concentration of the EPCRA section 313 chemical in the waste was measured by monitoring equipment and the flow rate of the waste was determined by mass balance, then the primary basis of the estimate should be “monitoring” (M). Even though a mass balance calculation also contributed to the estimate, “monitoring” should be indicated because monitoring data were used to estimate the concentration of the waste.

Mass balance (C) should only be indicated if it is **directly** used to calculate the mass (weight) of EPCRA section 313 chemical released. Monitoring data should be indicated as the basis of estimate **only** if the EPCRA section 313 chemical concentration is measured in the waste being released into the environment. Monitoring data should **not** be indicated, for example, if the monitoring data relate to a concentration of the EPCRA section 313 chemical in other process streams within the facility.

It is important to realize that the accuracy and proficiency of release estimation will improve over time. However, submitters are not required to use new emission factors or estimation techniques to revise previous Form R submissions.

Column C: Percent From Stormwater

This column relates only to Section 5.3—discharges to receiving streams or water bodies. If your facility has monitoring data on the amount of the EPCRA section 313 chemical in stormwater runoff (including unchanneled runoff), you must include that quantity of the EPCRA section 313 chemical in your water release in column A and indicate the percentage of the total quantity (by weight) of the EPCRA section 313 chemical contributed by stormwater in column C (Section 5.3C).

If your facility has monitoring data on the EPCRA section 313 chemical and an estimate of flow rate, you must use these data to determine the percent stormwater.

If you have monitored stormwater but did not detect the EPCRA section 313 chemical, enter zero in column C. If your facility has no stormwater monitoring data for the chemical, you should enter NA in this space on the form.

If your facility does not have periodic measurements of stormwater releases of the EPCRA section 313 chemical, but has submitted chemical-specific monitoring data in permit applications, then these data must be used to calculate the percent contribution from stormwater. One way to calculate the flow rates from stormwater runoff is the Rational Method. In this method, flow rates, Q, can be estimated by multiplying the land area of the facility, A, by the runoff coefficient, C,

and then multiplying that figure by the annual rainfall intensity, I (i.e., $Q = A * C * I$). The rainfall intensity, I, is specific to the geographical area of the country where the facility is located, and may be obtained from most standard engineering manuals for hydrology. The flow rate, Q, will have volumetric dimensions per unit time, and will have to be converted to units of pounds per year. The runoff coefficient represents the fraction of rainfall that does not seep into the ground but runs off as stormwater. The runoff coefficient is directly related to how the land in the drainage area is used. (See table below)

| <u>Description of Land Area</u> | <u>Runoff Coefficient</u> |
|---------------------------------|---------------------------|
| Business | |
| Downtown areas | 0.70–0.95 |
| Neighborhood areas | 0.50–0.70 |
| Industrial | |
| Light areas | 0.50–0.80 |
| Heavy areas | 0.60–0.90 |
| Industrial | |
| Railroad yard areas | 0.20–0.40 |
| Unimproved areas | 0.10–0.30 |
| Streets | |
| Asphaltic | 0.70–0.95 |
| Concrete | 0.80–0.95 |
| Brick | 0.70–0.85 |
| Drives and walks | 0.70–0.85 |
| Roofs | 0.75–0.95 |
| Lawns: Sandy Soil | |
| Flat, 2% | 0.05–0.10 |
| Average, 2–7% | 0.10–0.15 |
| Steep, 7% | 0.15–0.20 |
| Lawns: Heavy Soil | |
| Flat, 2% | 0.13–0.17 |
| Average, 2–7% | 0.18–0.22 |
| Steep, 7% | 0.25–0.35 |

You should choose the most appropriate runoff coefficient for your site or calculate a weighted-average coefficient, which takes into account different types of land use at your facility:

$$\text{Weighted-average runoff coefficient} = (\text{Area 1 \% of total})(C1) + (\text{Area 2 \% of total})(C2) + (\text{Area 3 \% of total})(C3) + \dots + (\text{Area } i \% \text{ of total})(Ci)$$

where

$$Ci = \text{runoff coefficient for a specific land use of Area } i.$$

Example 13: Stormwater Runoff

Your facility is located in a semi-arid region of the United States that has an annual precipitation (including snowfall) of 12 inches of rain. (Snowfall should be converted to the equivalent inches of rain; assume one foot of snow is equivalent to one inch of rain.) The total area covered by your facility is 42 acres (about 170,000 square meters or 1,829,520 square feet). The area of your facility is 50% unimproved area, 10% asphaltic streets, and 40% concrete pavement.

The total stormwater runoff from your facility is therefore calculated as follows:

| <u>Land Use</u> | <u>% Total Area</u> | <u>Runoff Coefficient</u> |
|-------------------|---------------------|---------------------------|
| Unimproved area | 50 | 0.20 |
| Asphaltic streets | 10 | 0.85 |
| Concrete pavement | 40 | 0.90 |

$$\text{Weighted-average runoff coefficient} = [(50\%) \times (0.20)] + [(10\%) \times (0.85)] + [(40\%) \times (0.90)] = 0.545$$

$$\begin{aligned} &(\text{Rainfall}) \times (\text{land area}) \times (\text{conversion factor}) \times (\text{runoff coefficient}) = \text{stormwater runoff} \\ &(1 \text{ ft/year}) \times (1,829,520 \text{ ft}^2) \times (7.48 \text{ gal/ft}^3) \times (0.545) = 7,458,222 \text{ gallons/year} \end{aligned}$$

$$\text{Total stormwater runoff} = 7,458,222 \text{ gallons/year}$$

Your stormwater monitoring data shows that the average concentration of zinc in the stormwater runoff from your facility from a biocide containing a zinc compound is 1.4 milligrams per liter. The total amount of zinc discharged to surface water through the plant wastewater discharge (non-stormwater) is 250 pounds per year. The total amount of zinc discharged with stormwater is:

$$(7,458,222 \text{ gallons stormwater}) \times (3.785 \text{ liters/gallon}) = 28,229,370 \text{ liters stormwater}$$

$$(28,229,370 \text{ liters stormwater}) \times (1.4 \text{ mg zinc/liter}) \times 10^{-3} \text{ g/mg} \times (1/454) \text{ lb/g} = 87 \text{ lb zinc.}$$

The total amount of zinc discharged from all sources of your facility is:

$$\begin{array}{r} 250 \text{ pounds zinc from wastewater discharged} \\ + 87 \text{ pounds zinc from stormwater runoff} \\ \hline 337 \text{ pounds zinc total water discharged} \end{array}$$

The percentage of zinc discharge through stormwater reported in section 5.3 column C on Form R is:

$$(87/337) \times 100\% = 26\%$$

Section 6. Transfers of the EPCRA Section 313 Chemical in Wastes to Off-Site Locations

You must report in this section the total annual quantity of the EPCRA section 313 chemical in wastes sent to any off-site facility for the purposes of disposal, treatment, energy recovery, or recycling. Report the total amount of the EPCRA section 313 chemical transferred off-site after any on-site waste treatment, recycling, or removal is completed.

For all toxic chemicals (except the dioxin and dioxin-like compounds category), do not enter the values in Section 6 in gallons, tons, liters, or any measure other than pounds. You must also enter the values as whole numbers. Numbers

following a decimal point are not acceptable for toxic chemicals other than those designated as PBT chemicals. For PBT chemicals, facilities should report release and other waste management quantities greater than 0.1 pound (except the dioxin and dioxin-like compounds category) provided the accuracy and the underlying data on which the estimate is based supports this level of precision. For the dioxin and dioxin-like compounds category, facilities should report at a level of precision supported by the accuracy of the underlying data and the estimation techniques on which the estimate is based. However, the smallest quantity that need be reported on the Form R for the dioxin and dioxin-like compounds category is 0.0001 grams (See example 12 on page 40). Notwithstanding the numeric precision used when

Instructions for Completing Part II of EPA Form R

determining reporting eligibility thresholds, facilities should report on Form R to the level of accuracy that their data supports, up to seven digits to the right of the decimal. EPA's reporting software and data management systems support data precision to seven digits to the right of the decimal.

NA vs. a Numeric Value (e.g., Zero). You must enter a numeric value if you transfer an EPCRA section 313 chemical to a publicly owned treatment works (POTW) or transfer wastes containing that toxic chemical to other off-site locations. If the aggregate amount transferred was less than 0.5 pound, then you should enter zero (unless the chemical is listed as a PBT chemical). Also report zero for transfers of listed mineral acids (i.e., hydrogen fluoride and nitric acid) if they have been neutralized to a pH of 6 or above prior to discharge to a POTW; do not check NA.

However, if you do not discharge wastewater containing the reported EPCRA section 313 chemical to a POTW, you should enter NA in the box for the POTW's name in Section 6.1.B. If you do not ship or transfer wastes containing the reported EPCRA section 313 chemical to other off-site locations, you should enter NA in the box for the off-site location's EPA Identification Number in Section 6.2.

Important: You must number the boxes for reporting the information for each POTW or other off-site location in Sections 6.1 and 6.2. In the upper left hand corner of each box, the section number is either 6.1.B. or 6.2.

If you report a transfer of the listed EPCRA section 313 chemical to one or more POTWs, you should number the boxes in Section 6.1.B as 6.1.B.1, 6.1.B.2, etc. If you transfer the EPCRA section 313 chemical to more than two POTWs, you should photocopy page 3 of Form R as many times as necessary and then number the boxes consecutively for each POTW. At the bottom of Part II Section 6.1 of the Form R you will find instructions for indicating the total number of page 3s that you are submitting as part of Form R, as well as indicating the sequence of those pages. For example, your facility transfers the reported EPCRA section 313 chemical in wastewaters to three POTWs. You would photocopy page 3 once, indicate at the bottom of each page 3 that there are a total of two page 3s and then indicate the first and second page 3. The boxes for the two POTWs on the first page 3 should be numbered 6.1.B.1 and 6.1.B.2, while the box for third POTW on the second page 3 should be numbered 6.1.B.3.

If you report a transfer of the EPCRA section 313 chemical to one or more other off-site locations, you should number the boxes in section 6.2 as 6.2.1, 6.2.2, etc. If you transfer the EPCRA section 313 chemical to more than two other off-site locations, you should photocopy page 4 of Form R as many times as necessary and then number the boxes consecutively for each off-site location. At the bottom of page 4 you will find instructions for indicating the total number of page 4s

that you are submitting as part of Form R as well as indicating the sequence of those pages. For example, your facility transfers the reported EPCRA section 313 chemical to three other off-site locations. You should photocopy page 4 once, indicate at the bottom of Section 6.2 on each page 4 that there are a total of two page 4s and then indicate the first and second page 4. The boxes for the two off-site locations on the first page 4 would be numbered 6.2.1 and 6.2.2, while the box for the third off-site location on the second page 4 should be numbered 6.2.3.

6.1 Discharges to Publicly Owned Treatment Works

In Section 6.1.A, estimate the quantity of the reported EPCRA section 313 chemical transferred to all publicly owned treatment works (POTWs) and the basis upon which the estimate was made. In Section 6.1.B., you should enter the name and address for each POTW to which your facility discharges or otherwise transfers wastewater containing the reported EPCRA section 313 chemical. The most common transfers of this type will be conveyances of the toxic chemical in facility wastewater through underground sewage pipes; however, materials may also be trucked or transferred via some other direct methods to a POTW.

If you do not discharge wastewater containing the reported EPCRA section 313 chemical to a POTW, enter NA in the box for the POTW's name in Section 6.1.B. (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 6).

6.1.A.1 Total Transfers

Enter the total amount, in pounds, of the reported EPCRA section 313 chemical that is contained in the wastewaters transferred to all POTWs. Do not enter the total poundage of the wastewaters. If the total amount transferred is less than 1,000 pounds, you may report a range by entering the appropriate range code (range reporting in section 6.1.A.1 does not apply to PBT chemicals). The following reporting range codes are to be used:

| Code | Reporting Range (in pounds) |
|------|-----------------------------|
| A | 1–10 |
| B | 11–499 |
| C | 500–999 |

6.1.A.2 Basis of Estimate

You must identify the basis for your estimate of the total quantity of the reported EPCRA section 313 chemical in the wastewater transferred to all POTWs. You should enter one of the following letter codes that applies to the method by which the largest percentage of the estimate was derived.

- M— Estimate is based on monitoring data or measurements for the EPCRA section 313 chemical as transferred to an off-site facility.
- C— Estimate is based on mass balance calculations, such as calculation of the amount of the EPCRA section 313 chemical in streams entering and leaving process equipment.
- E— Estimate is based on published emission factors, such as those relating release quantity to through-put or equipment type (e.g., air emission factors).
- O— Estimate is based on other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgment. This would include applying an estimated removal efficiency to a waste stream, even if the composition of the stream before treatment was fully identified through monitoring data.

If you transfer an EPCRA section 313 chemical to more than one POTW, you should report the basis of estimate that was used to determine the largest percentage of the EPCRA section 313 chemical that was transferred.

6.2 Transfers to Other Off-Site Locations

In Section 6.2 enter the EPA Identification Number, name, and address for each off-site location to which your facility ships or transfers wastes containing the reported EPCRA section 313 chemical for the purposes of disposal, treatment, energy recovery, or recycling. Also estimate the quantity of the reported EPCRA section 313 chemical transferred and the basis upon which the estimate was made. This would include any residual chemicals in “empty” containers transferred off-site. EPA expects that all containers (bags, totes, drums, tank trucks, etc.) will have a small amount of residual solids and/or liquids. Please see Example 14 on page 48 for residue quantities left in drums and tanks when emptied.

If appropriate, you must report multiple activities for each off-site location. For example, if your facility sends a reported EPCRA section 313 chemical in a single waste stream to an off-site location where some of the EPCRA section 313 chemical is to be recycled while the remainder of the quantity transferred is to be treated, you must report both the waste treatment and recycle activities, along with the quantity associated with each activity.

If your facility transfers an EPCRA section 313 chemical to an off-site location and that off-site location performs more than four activities on that chemical, provide the necessary information in Box 6.2.1 for the off-site facility and the first four activities. Provide the information on the remainder of the activities in Box 6.2.2 and provide again the off-site facility identification and location information.

If you do not ship or transfer wastes containing the EPCRA section 313 chemical to other off-site locations, you should enter NA (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 6) in the box for the off-site location's EPA Identification Number (defined in 40 CFR 260.10 and therefore commonly referred to as the RCRA ID Number). This number may be found on the Uniform Hazardous Waste Manifest, which is required by RCRA regulations. If you ship or transfer wastes containing an EPCRA section 313 chemical and the off-site location does not have an EPA Identification Number (e.g., it does not accept RCRA hazardous wastes or you do not know the RCRA Identification Number), you should enter NA in the box for the off-site location EPA Identification Number. If you ship or transfer the reported EPCRA section 313 chemical in wastes to another country, you do not need to report a RCRA ID for that waste. You should indicate NA in the RCRA ID field. Enter the complete address of the non-U.S. facility in the off-site address fields, the city in the city field, the non-U.S. state or province in the county field, the postal code in the zip code field, and the foreign country code in the country field. The most commonly used FIPS codes are listed in Table IV. To obtain a FIPS code for a country not listed, contact the EPCRA Call Center. There is nothing to enter in the state field.

6.2a Column A: Total Transfers

For each off-site location, enter the total amount, in pounds (in grams for dioxin and dioxin-like compounds), of the EPCRA section 313 chemical that is contained in the waste transferred to that location. **Do not enter the total poundage of the waste.** If you do not ship or transfer wastes containing the EPCRA section 313 chemical to other off-site locations, you should enter NA (See discussion of NA vs. a Numeric Value (e.g., Zero) in the introduction of Section 6) in the box for the off-site location's EPA Identification Number (defined in 40 CFR 260.10 and therefore commonly referred to as the RCRA ID Number). If the total amount transferred is less than 1,000 pounds, you may report a range by entering the appropriate range code (range reporting in section 6.2 does not apply to PBT chemicals). The following reporting range codes are to be used:

| <u>Code</u> | <u>Reporting Range (in pounds)</u> |
|-------------|------------------------------------|
| A | 1–10 |
| B | 11–499 |
| C | 500–999 |

Summary of Residue Quantities From Pilot-Scale Experimental Study^{a,b}
(weight percent of drum capacity)

| Unloading Method | Vessel Type | Value | Material | | | |
|------------------|------------------------------|-------|-----------------------|--------------------|------------------------|----------------------------------|
| | | | Kerosene ^c | Water ^d | Motor Oil ^e | Surfactant Solution ^f |
| Pumping | Steel drum | Range | 1.93 – 3.08 | 1.84 – 2.61 | 1.97 – 2.23 | 3.06 |
| | | Mean | 2.48 | 2.29 | 2.06 | 3.06 |
| Pumping | Plastic drum | Range | 1.69 – 4.08 | 2.54 – 4.67 | 1.70 – 3.48 | Not Available |
| | | Mean | 2.61 | 3.28 | 2.30 | Available |
| Pouring | Bung-top steel drum | Range | 0.244 – 0.472 | 0.266 – 0.458 | 0.677 – 0.787 | 0.485 |
| | | Mean | 0.404 | 0.403 | 0.737 | 0.485 |
| Pouring | Open-top steel drum | Range | 0.032 – 0.080 | 0.026 – 0.039 | 0.328 – 0.368 | 0.089 |
| | | Mean | 0.054 | 0.034 | 0.350 | 0.089 |
| Gravity Drain | Slope-bottom steel tank | Range | 0.020 – 0.039 | 0.016 – 0.024 | 0.100 – 0.121 | 0.048 |
| | | Mean | 0.033 | 0.019 | 0.111 | 0.048 |
| Gravity Drain | Dish-bottom steel tank | Range | 0.031 – 0.042 | 0.033 – 0.034 | 0.133 – 0.191 | 0.058 |
| | | Mean | 0.038 | 0.034 | 0.161 | 0.058 |
| Gravity Drain | Dish-bottom glass-lined tank | Range | 0.024 – 0.049 | 0.020 – 0.040 | 0.112 – 0.134 | 0.040 |
| | | Mean | 0.040 | 0.033 | 0.127 | 0.040 |

^aFrom “Releases During Cleaning of Equipment.” Prepared by PEI Associates, Inc., for the U.S. Environmental Protection Agency, Office of Pesticides and Toxic Substances, Washington DC, Contract No. 68-02-4248. June 30, 1986.

^bThe values listed in this table should only be applied to similar vessel types, unloading methods, and bulk fluid materials. At viscosities greater than 200 centipoise, the residue quantities can rise dramatically and the information on this table is not applicable.

^cFor kerosene, viscosity = 5 centipoise, surface tension = 29.3 dynes/cm²

^dFor water, viscosity = 4 centipoise, surface tension = 77.3 dynes/cm²

^eFor motor oil, viscosity = 94 centipoise, surface tension = 34.5 dynes/cm²

^fFor surfactant solution, viscosity = 3 centipoise, surface tension = 31.4 dynes/cm²

Example 14: Container Residue

You have determined that a Form R for an EPCRA section 313 chemical must be submitted. The facility purchases and uses one thousand 55-gallon steel drums that contain a 10% solution of the chemical. Further, it is assumed that the physical properties of the solution are similar to water. The solution is pumped from the drums directly into a mixing vessel and the “empty” drums are triple-rinsed with water. The rinse water is indirectly discharged to a POTW and the cleaned drums are sent to a drum reclaimer.

In this example, it can be assumed that all of the residual solution in the drums was transferred to the rinse water. Therefore, the quantity transferred to the drum reclaimer should be reported as “zero.” The annual quantity of residual solution that is transferred to the rinse water can be estimated by multiplying the mean weight percent of residual solution remaining in water from pumping a steel drum (2.29% from the preceding table, "Summary of Residue Quantities From Pilot-Scale Experimental Study") by the total annual weight of solution in the drum (density of solution multiplied by drum volume). If the density is not known, it may be appropriate to use the density of water (8.34 pounds per gallon):

$$(2.29\%) \times (8.34 \text{ pounds/gallon}) \times (55 \text{ gallons/drum}) \times (1,000 \text{ drums}) = 10,504 \text{ pounds solution}$$

The concentration of the EPCRA section 313 chemical in the solution is only 10%.

$$(10,504 \text{ pounds solution}) \times (10\%) = 1,050 \text{ pounds}$$

Therefore, 1,050 pounds of the chemical are transferred to the POTW.

If you transfer the EPCRA section 313 chemical in wastes to an off-site facility for distinct and multiple purposes, you must report those activities for each off-site location, along with the quantity of the reported EPCRA section 313 chemical associated with each activity. For example, your facility transfers a total of 15,000 pounds of toluene to an off-site location that will use 5,000 pounds for the purposes of energy recovery, enter 7,500 pounds into a recovery process, and dispose of the remaining 2,500 pounds. These quantities and the associated activity codes must be reported separately in Section 6.2. (See Figure 4 for a hypothetical Section 6.2 completed for two off-site locations, one of which receives the transfer of 15,000 pounds of toluene as detailed.) If you have fewer than four total transfers in Section 6.2 Column A (see examples in Figure 4), an NA should be placed in Column A of the first unused row to indicate the termination of the sequence. If all four rows are used, there is no need to terminate the sequence. If there are more than four total transfers, re-enter the name of the off-site location, address, etc. in the next row (6.2.2) and then you should enter NA when the sequence has terminated if there are fewer than 8 (i.e. anytime there are fewer than 4 transfers listed in a Section 6.2 block, an NA should be used to terminate the sequence).

Do not double or multiple count amounts transferred off-site. For example, when a reported EPCRA section 313 chemical is sent to an off-site facility for sequential activities and the specific quantities associated with each activity are unknown, you should report only a single quantity (the total quantity transferred to that off-site location) along with a single activity code. In such a case, you should report the activity applied to the majority of the reported EPCRA section 313 chemical sent off-site, not the ultimate disposition of the EPCRA section 313 chemical. For example, when an EPCRA section 313 chemical is first recovered and then treated with the majority of the EPCRA section 313 chemical being recovered and only a fraction subsequently treated, you should report the appropriate recycling activity along with the quantity.

6.2b Column B: Basis of Estimate

You must identify the basis for your estimates of the quantities of the reported EPCRA section 313 chemical in waste transferred to each off-site location. Enter one of the following letter codes that applies to the method by which the largest percentage of the estimate was derived.

- M— Estimate is based on monitoring data or measurements for the EPCRA section 313 chemical as transferred to an off-site facility.
- C— Estimate is based on mass balance calculations, such as calculation of the amount of the EPCRA section 313 chemical in streams entering and leaving process equipment.

Example 15: Reporting Metals and Metal Category Compounds that are Sent Off-site

A facility manufactures a product containing elemental copper, exceeding the processing threshold for copper. Various metal fabrication operations for the process produce a wastewater stream that contains some residual copper and off-specification copper material. The wastewater is collected and sent directly to a POTW. Periodic monitoring data show that 500 pounds of copper were transferred to the POTW in the reporting year. The off-specification products (containing copper) are collected and sent off-site to a RCRA Subtitle C landfill. Sampling analyses of the product combined with hazardous waste manifests were used to determine that 1,200 pounds of copper in the off-spec product were sent to the off-site landfill.

Therefore, the facility must report 500 pounds in Section 6.1, 1200 pounds in Section 6.2 (waste code M65 (RCRA Subtitle C Landfill) should be used) and 1,700 pounds in Section 8.1 — Quantity Released.

Note that for EPCRA section 313 chemicals that are not metals or metal category compounds, the quantity sent to POTWs and to other off-site treatment locations must be reported in Section 8.7 — Quantity Treated Off-site. However, if you know that some or all of the chemical is not treated for destruction at the off-site location you must report that quantity in Section 8.1 — Quantity Released.

- E— Estimate is based on published emission factors, such as those relating release quantity to throughput or equipment type (e.g., air emission factors).
- O— Estimate is based on other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best engineering judgment. This would include applying an estimated removal efficiency to a waste stream, even if the composition of the stream before treatment was fully identified through monitoring data.

6.2c Column C: Type of Waste Management: Disposal/Treatment/Energy Recovery/Recycling

You should enter one of the following M codes to identify the type of disposal, treatment, energy recovery, or recycling methods used by the off-site location for the reported EPCRA section 313 chemical. You must use more than one line and code for a single location when distinct quantities of the reported EPCRA section 313 chemical are subject to different waste management activities, including disposal, treatment, energy recovery, or recycling. You must use the code that represents the ultimate disposition of the chemical.

Instructions for Completing Part II of EPA Form R

If the EPCRA section 313 chemical is sent off-site for further direct reuse (e.g., an EPCRA section 313 chemical in used solvent that will be used as lubricant at another facility) and does not undergo a waste management activity (i.e., release (including disposal), treatment, energy recovery, or recycling (recovery)) prior to that reuse, it need not be reported in section 6.2 or section 8.

Incineration vs. Energy Recovery

You must distinguish between incineration, which is waste treatment, and legitimate energy recovery. For you to claim that a reported EPCRA section 313 chemical sent off-site is used for the purposes of energy recovery and not for treatment for destruction, the EPCRA section 313 chemical must have a significant heating value and must be combusted in an energy recovery unit such as an industrial boiler, furnace, or kiln. In a situation where the reported EPCRA section 313 chemical is in a waste that is combusted in an energy recovery unit, but the EPCRA section 313 chemical does not have a significant heating value, e.g., CFCs, you should use code M54, Incineration/ Insignificant Fuel Value, to indicate that the EPCRA section 313 chemical was incinerated in an energy recovery unit but did not contribute to the heating value of the waste.

Metals and Metal Category Compounds

Metals and metal category compounds will be managed in waste either by being released (including disposed) or by being recycled. Remember that the release and other waste management information that you report for metal category compounds will be the total amount of the parent metal released or recycled and NOT the whole metal category compound. The metal has no heat value and thus cannot be combusted for energy recovery and cannot be treated because it cannot be destroyed. Thus, transfers of metals and metal category compounds for further waste management should be reported as either a transfer for recycling or a transfer for disposal. The applicable waste management codes for transfers of metals and metal category compounds for recycling are M24, metals recovery, M93, waste broker — recycling, or M26, other reuse/recovery. Applicable codes for transfers for disposal include M10, M41, M62, M63, M64, M65, M71, M73, M79, M90, M94, and M99. These codes are for off-site transfers for further waste management in which the wastestream may be treated but the metal contained in the wastestream is not treated and is ultimately released. For example, M41 should be used for a metal or metal category compound that is stabilized in preparation for disposal.

Applicable codes for Part II, Section 6.2, column C are:

Disposal

| | |
|-----|--|
| M10 | Storage Only |
| M41 | Solidification/Stabilization—Metals and Metal Category Compounds only |
| M62 | Wastewater Treatment (Excluding POTW) — Metals and Metal Category Compounds only |
| M63 | Surface Impoundment |
| M64 | Other Landfills |
| M65 | RCRA Subtitle C Landfills |
| M71 | Underground Injection |
| M73 | Land Treatment |
| M79 | Other Land Disposal |
| M90 | Other Off-Site Management |
| M94 | Transfer to Waste Broker — Disposal |
| M99 | Unknown |

Treatment

| | |
|-----|--|
| M40 | Solidification/Stabilization |
| M50 | Incineration/Thermal Treatment |
| M54 | Incineration/Insignificant Fuel Value |
| M61 | Wastewater Treatment (Excluding POTW) |
| M69 | Other Waste Treatment |
| M95 | Transfer to Waste Broker — Waste Treatment |

Energy Recovery

| | |
|-----|--|
| M56 | Energy Recovery |
| M92 | Transfer to Waste Broker — Energy Recovery |

Recycling

| | |
|-----|--------------------------------------|
| M20 | Solvents/Organics Recovery |
| M24 | Metals Recovery |
| M26 | Other Reuse or Recovery |
| M28 | Acid Regeneration |
| M93 | Transfer to Waste Broker — Recycling |

Figure 4
Hypothetical Section 6.2 Completed for Two Off-Site Locations

This off-site location receives a transfer of 15,000 pounds of toluene and will combust 5,000 pounds for the purposes of energy

| SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATION | | | | | |
|--|---|--------------------------------------|----------------|---|--|
| 6.2. 1 | Off-Site EPA Identification Number (RCRA No.) | | COD566162461 | | |
| | Off-Site Location Name Acme Waste Services | | | | |
| Street Address 5 Market Street | | | | | |
| City Releaseville | | | County Hill | | |
| State CO | | Zip Code 80461 | | Is location under control of reporting facility or parent company <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| A. Total Transfers (pounds)/year (enter range code or estimate) | | B. Basis of Estimate (enter code) | | C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code) | |
| 1. 5,000 | | 1. <input type="radio"/> | | 1. M56 | |
| 2. 7,500 | | 2. <input checked="" type="radio"/> | | 2. M20 | |
| 3. 2,500 | | 3. <input type="radio"/> | | 3. M72 | |
| 4. NA | | 4. | | 4. M | |

recovery, enter 7,500 pounds into a recovery process, and dispose of the remaining 2,500 pounds.

This off-site location receives a transfer of 12,500 pounds of tetrachloroethylene (perchloroethylene) that is part of a waste that is combusted for the purposes of energy recovery in an industrial furnace. Note that the tetrachloroethylene should be reported using code M54 to indicate that it is combusted in an energy recovery unit but it does not contribute to the heating value of the waste.

| SECTION 6.2 TRANSFERS TO OTHER OFF-SITE LOCATION | | | | | |
|--|---|--------------------------------------|-----------------|---|--|
| 6.2. 2 | Off-Site EPA Identification Number (RCRA No.) | | COD167725432 | | |
| | Off-Site Location Name Combustion, Inc. | | | | |
| Street Address 25 Facility Road | | | | | |
| City Dumfry | | | County Burns | | |
| State CO | | Zip Code 80500 | | Is location under control of reporting facility or parent company <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | |
| A. Total Transfers (pounds)/year (enter range code or estimate) | | B. Basis of Estimate (enter code) | | C. Type of Waste Treatment/Disposal/ Recycling/Energy Recovery (enter code) | |
| 1. 12,500 | | 1. <input type="radio"/> | | 1. M54 | |
| 2. NA | | 2. | | 2. M | |
| 3. | | 3. | | 3. M | |
| 4. | | 4. | | 4. M | |

Section 7. On-Site Waste Treatment, Energy Recovery, and Recycling Methods

You must report in this section the methods of waste treatment, energy recovery, and recycling applied to the reported EPCRA section 313 chemical in wastes on-site. There are three separate sections for reporting such activities.

Section 7A On-Site Waste Treatment Methods and Efficiency

Most of the chemical-specific information required by EPCRA section 313 that is reported on Form R is specific to the EPCRA section 313 chemical rather than the waste stream containing the EPCRA section 313 chemical. However, EPCRA section 313 does require that waste treatment methods applied on-site to waste streams that contain the EPCRA section 313 chemical be reported. This information is reportable regardless of whether the facility actively applies treatment or the treatment of the waste stream occurs passively. This information is collected in Section 7A of Form R.

In Section 7A, you must provide the following information if you treat waste streams containing the reported EPCRA section 313 chemical on-site:

- The general waste stream types containing the EPCRA section 313 chemical being reported;
- The waste treatment method(s) or sequence used on all waste streams containing the EPCRA section 313 chemical;
- The range of concentration of the EPCRA section 313 chemicals in the influent to the waste treatment method;
- The efficiency of each waste treatment method or waste treatment sequence in destroying or removing the EPCRA section 313 chemical; and
- Whether the waste treatment efficiency figure was based on actual operating data.

Use a separate line in Section 7A for each general waste stream type. Report only information about treatment of waste streams at your facility, not information about off-site waste treatment.

If you do not perform on-site treatment of waste streams containing the reported EPCRA section 313 chemical, check the NA box at the top of Section 7A.

7A Column a: General Waste Stream

For each waste treatment method, indicate the type of waste stream containing the EPCRA section 313 chemical that is treated. Enter the letter code that corresponds to the general waste stream type:

- A Gaseous (gases, vapors, airborne particulates)
- W Wastewater (aqueous waste)
- L Liquid waste streams (non-aqueous waste)
- S Solid waste streams (including sludges and slurries)

If a waste is a combination of water and organic liquid and the organic content is less than 50%, report it as a wastewater (W). Slurries and sludges containing water should be reported as solid waste if they contain appreciable amounts of dissolved solids, or solids that may settle, such that the viscosity or density of the waste is considerably different from that of process wastewater.

7A Column b: Waste Treatment Method(s) Sequence

Enter the appropriate waste treatment code from the list below for each on-site waste treatment method used on a waste stream containing the EPCRA section 313 chemical, regardless of whether the waste treatment method actually removes the specific EPCRA section 313 chemical being reported. Waste treatment methods must be reported for each type of waste stream being treated (i.e., gaseous waste streams, aqueous waste streams, liquid non-aqueous waste streams, and solids). Except for the air emission treatment codes, the waste treatment codes are not restricted to any medium.

Waste streams containing the EPCRA section 313 chemical may have a single source or may be aggregates of many sources. For example, process water from several pieces of equipment at your facility may be combined prior to waste treatment. Report waste treatment methods that apply to the aggregate waste stream, as well as waste treatment methods that apply to individual waste streams. If your facility treats various wastewater streams containing the EPCRA section 313 chemical in different ways, the different waste treatment methods must be listed separately.

If your facility has several pieces of equipment performing a similar service in a waste treatment sequence, you may combine the reporting for such equipment. It is not necessary to enter four codes to cover four scrubber units, for example, if all four are treating waste streams of similar character (e.g., sulfuric acid mist emissions), have similar influent concentrations, and have similar removal efficiencies. If, however, any of these parameters differs from one unit to the next, each scrubber should be listed separately.

If you are using the hardcopy paper form, and if your facility performs more than eight sequential waste treatment methods on a single general waste stream, continue listing the methods in the next row and renumber appropriately those waste treatment method code boxes you used to continue the sequence. For example, if the general waste stream in box 7A.1a had nine treatment methods applied to it, the ninth method would be indicated in the first method box for row 7A.2a. The numeral "1" would be crossed out, and a "9" would be inserted.

Example 16: Calculating Releases and Other Waste Management Quantities

Your facility disposes of 14,000 pounds of lead chromate (PbCrO₄.PbO) in an on-site landfill and transfers 16,000 pounds of lead selenite (PbSeO₄) to an off-site land disposal facility. You would therefore be submitting three separate reports on the following: lead compounds, selenium compounds, and chromium compounds. However, the quantities you would be reporting would be the pounds of “parent” metal being released on-site or transferred off-site for further waste management. All quantities are based on mass balance calculations (See Section 5, Column B for information on Basis of Estimate and Section 6.2, Column C for waste management codes and information on transfers of EPCRA section 313 chemicals in wastes). You would calculate releases of lead, chromium, and selenium by first determining the percentage by weight of these metals in the materials you use as follows:

| | |
|--|-----------------------------------|
| Lead Chromate (PbCrO ₄ .PbO) | Molecular weight = 546.37 |
| Lead (2 Pb atoms) | Atomic weight = 207.2 x 2 = 414.4 |
| Chromium (1 Cr atom) | Atomic weight = 51.996 |

Lead chromate is therefore (% by weight)

$$(414.4/546.37) = 75.85\% \text{ lead and}$$

$$(51.996/546.37) = 9.52\% \text{ chromium}$$

| | |
|--|---------------------------|
| Lead Selenite (PbSeO ₄) | Molecular weight = 350.17 |
| Lead (1 Pb atom) | Atomic weight = 207.2 |
| Selenium (1 Se atom) | Atomic weight = 78.96 |

Lead selenite is therefore (% by weight)

$$(207.2/350.17) = 59.17\% \text{ lead and}$$

$$(78.96/350.17) = 22.55\% \text{ selenium.}$$

The total pounds of lead, chromium, and selenium disposed on or off-site from your facility are as follows:

Lead

| | |
|---------------------------------|--|
| Disposal on-site: | 0.7585 x 14,000 = 10,619 pounds from lead chromate |
| Transfer off-site for disposal: | 0.5917 x 16,000 = 9,467 pounds from lead selenite |

Chromium

| | |
|-------------------|---|
| Disposal on-site: | 0.0952 x 14,000 = 1,333 pounds from lead chromate |
|-------------------|---|

Selenium

| | |
|---------------------------------|---|
| Transfer off-site for disposal: | 0.2255 x 16,000 = 3,608 pounds from lead selenite |
|---------------------------------|---|

Treatment applied to any other general waste stream types would then be listed in the next empty row. In the scenario above, for instance, the second general waste stream would be reported in row 7A.3a. See Figure 5 for an example of a hypothetical Section 7A completed for a nine-step waste treatment process and a single waste treatment method.

The completion of each waste treatment method sequence should clearly be marked by using an NA following the last waste treatment code, except in the situation in which exactly eight waste treatment methods are listed. For example, if the waste stream in box 7A.1b has three waste treatment codes listed, a NA should be placed in the fourth method box to indicate the termination of the sequence. If the waste stream has exactly eight waste treatment codes, there is no need to

Instructions for Completing Part II of EPA Form R

enter an NA to terminate the sequence. If the waste stream has more than eight waste treatment codes: (1) Enter NA in Column C in the initial row and any subsequent rows in which the sequence is not terminated to indicate that the given waste stream continues on the next row (e.g., if waste treatment codes are continued in 7A.2b from 7A.1b, a NA should be indicated in 7A.1c.); (2) enter NA in the box following the last waste stream code to indicate the termination of the sequence, unless the sequence ends in the method box 8 (i.e., there are 8, 16, 24, 32, etc. waste stream codes); and (3) complete the information for Columns C, D, and E in the last row for a given sequence. For example, if the sequence terminates in 7A.3b, then fill in all relevant information for C, D, and E in this row. You do not need to reenter your General Waste Stream code in column A. See Figure 5 for an example.

If you need additional space to report under Section 7A, photocopy page 4 of Form R as many times as necessary. At the bottom of page 4 you will find instructions for indicating the total number of page 4s that you are submitting as part of Form R, as well as instructions for indicating the sequence of those pages.

Waste Treatment Codes

Air Emissions Treatment (applicable to gaseous waste streams only)

| | |
|-----|------------------------------|
| A01 | Flare |
| A02 | Condenser |
| A03 | Scrubber |
| A04 | Absorber |
| A05 | Electrostatic Precipitator |
| A06 | Mechanical Separation |
| A07 | Other Air Emission Treatment |

Biological Treatment

| | |
|-----|----------------------------|
| B11 | Aerobic |
| B21 | Anaerobic |
| B31 | Facultative |
| B99 | Other Biological Treatment |

Chemical Treatment

| | |
|-----|---|
| C01 | Chemical Precipitation — Lime or Sodium Hydroxide |
| C02 | Chemical Precipitation — Sulfide |
| C09 | Chemical Precipitation — Other |
| C11 | Neutralization |
| C21 | Chromium Reduction |
| C31 | Complexed Metals Treatment (other than pH adjustment) |
| C41 | Cyanide Oxidation — Alkaline Chlorination |
| C42 | Cyanide Oxidation — Electrochemical |

| | |
|-----|---|
| C43 | Cyanide Oxidation — Other |
| C44 | General Oxidation (including Disinfection) — Chlorination |
| C45 | General Oxidation (including Disinfection) — Ozonation |
| C46 | General Oxidation (including Disinfection) — Other |
| C99 | Other Chemical Treatment |

Incineration/Thermal Treatment

| | |
|-----|--|
| F01 | Liquid Injection |
| F11 | Rotary Kiln with Liquid Injection Unit |
| F19 | Other Rotary Kiln |
| F31 | Two Stage |
| F41 | Fixed Hearth |
| F42 | Multiple Hearth |
| F51 | Fluidized Bed |
| F61 | Infra-Red |
| F71 | Fume/Vapor |
| F81 | Pyrolytic Destructor |
| F82 | Wet Air Oxidation |
| F83 | Thermal Drying/Dewatering |
| F99 | Other Incineration/Thermal Treatment |

Physical Treatment

| | |
|-----|---|
| P01 | Equalization |
| P09 | Other Blending |
| P11 | Settling/Clarification |
| P12 | Filtration |
| P13 | Sludge Dewatering (non-thermal) |
| P14 | Air Flotation |
| P15 | Oil Skimming |
| P16 | Emulsion Breaking — Thermal |
| P17 | Emulsion Breaking — Chemical |
| P18 | Emulsion Breaking — Other |
| P19 | Other Liquid Phase Separation |
| P21 | Adsorption — Carbon |
| P22 | Adsorption — Ion Exchange (other than for recovery/reuse) |
| P23 | Adsorption — Resin |
| P29 | Adsorption — Other |
| P31 | Reverse Osmosis (other than for recovery/reuse) |
| P41 | Stripping — Air |
| P42 | Stripping — Steam |
| P49 | Stripping — Other |
| P51 | Acid Leaching (other than for recovery/reuse) |
| P61 | Solvent Extraction (other than recovery/reuse) |
| P99 | Other Physical Treatment |

| SECTION 7A. ON-SITE WASTE TREATMENT METHODS AND EFFICIENCY | | | | | | | | | |
|---|---|---|-----|------------------------------------|--|-----------------------------|-------|-------|-----|
| <input type="checkbox"/> Not Applicable (NA) - Check here if no on-site waste treatment is applied to any waste stream containing the toxic chemical or chemical category. | | | | | | | | | |
| a. General Waste Stream (enter code) | b. Waste Treatment Method(s) Sequence (enter 3-character code(s)) | | | c. Range of Influent Concentration | d. Waste Treatment Efficiency Estimate | e. Based on Operating Data? | | | |
| 7A.1a | 7A.1b | 1 | P12 | 2 | P18 | 7A.1c | 7A.1d | 7A.1e | |
| W | | 3 | P17 | 4 | P61 | NA | % | Yes | No |
| | | 6 | P21 | 7 | B21 | | | 8 | P11 |
| 7A.2a | 7A.2b | 9 | C44 | 2 | NA | 7A.2c | 7A.2d | 7A.2e | |
| | | 3 | | 4 | | 1 | 99 % | Yes | No |
| | | 6 | | 7 | | | | 8 | |
| 7A.3a | 7A.3b | 1 | A01 | 2 | NA | 7A.3c | 7A.3d | 7A.3e | |
| A | | 3 | | 4 | | 1 | 91 % | Yes | No |
| | | 6 | | 7 | | | | 8 | |

Figure 5. Hypothetical Section 7A

Solidification/Stabilization

- G01 Cement Processes (including silicates)
- G09 Other Pozzolonic Processes (including silicates)
- G11 Asphaltic Processes
- G21 Thermoplastic Techniques
- G99 Other Solidification Processes

7A Column c: Range of Influent Concentration

The form requires an indication of the range of concentration of the EPCRA section 313 chemical in the waste stream (i.e., the influent) as it typically enters the waste treatment step or sequence. The concentration is based on the amount or mass of the EPCRA section 313 chemical in the waste stream as compared to the total amount or mass of the waste stream. Enter in the space provided one of the following code numbers corresponding to the concentration of the EPCRA section 313 chemical in the influent:

- 1 = Greater than 10,000 parts per million (1%)
- 2 = 100 parts per million (0.01%) to 10,000 parts per million (1%)

- 3 = 1 part per million (0.0001%) to 100 parts per million (0.01%)
- 4 = 1 part per billion to 1 part per million
- 5 = Less than 1 part per billion

Note: Parts per million (ppm) is:

- milligrams/kilogram (mass/mass) for solids and liquids;
- cubic centimeters/cubic meter (volume/volume) for gases;
- milligrams/liter for solutions or dispersions of the chemical in water; and
- milligrams of chemical/kilogram of air for particulates in air.

If you have particulate concentrations (at standard temperature and pressure) as grains/cubic foot of air, multiply by 1766.6 to convert to parts per million; if in milligrams/cubic meter, multiply by 0.773 to obtain parts per million. These conversion factors are for standard conditions of 0°C (32°F) and 760 mm Hg atmospheric pressure.

7A Column d: Waste Treatment Efficiency Estimate

In the space provided, enter the number indicating the percentage of the EPCRA section 313 chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. The waste treatment efficiency (expressed as percent removal) represents the percentage of the EPCRA section 313 chemical destroyed or removed (based on amount or mass), not merely changes in volume or concentration of the EPCRA section 313 chemical in the waste stream. The efficiency, which can reflect the overall removal from sequential treatment methods applied to the general waste stream, refers only to the percent destruction, degradation, conversion, or removal of the EPCRA section 313 chemical from the waste stream, it does not refer to the percent conversion or removal of other constituents in the waste stream. The efficiency also does not refer to the general efficiency of the treatment method for any waste stream. For some waste treatment methods, the percent removal will represent removal by several mechanisms, as in an aeration basin, where an EPCRA section 313 chemical may evaporate, biodegrade, or be physically removed from the sludge.

Percent removal can be calculated as follows:

$$\frac{(I - E)}{I} \times 100\%$$

where:

- I = amount of the EPCRA section 313 chemical in the influent waste stream (entering the waste treatment step or sequence) and
- E = amount of the EPCRA section 313 chemical in the effluent waste stream (exiting the waste treatment step or sequence).

Calculate the amount of the EPCRA section 313 chemical in the influent waste stream by multiplying the concentration (by weight) of the EPCRA section 313 chemical in the waste stream by the total amount or weight of the waste stream. In most cases, the percent removal compares the treated effluent to the influent for the particular type of waste stream. For solidification of wastewater, the waste treatment efficiency can be reported as 100% if no volatile EPCRA section 313 chemicals were removed with the water or evaporated into the air. Percent removal does not apply to incineration because the waste stream, such as wastewater or liquids, may not exist in a comparable form after waste treatment and the purpose of incineration as a waste treatment is to destroy the EPCRA section 313 chemical by converting it to carbon dioxide and water or other byproducts. In cases where the EPCRA section 313 chemical is incinerated, the percent efficiency must be based on the amount of the EPCRA section 313 chemical destroyed or combusted, except for metals or metal category compounds. In the cases in which

a metal or metal category compound is incinerated, the efficiency is reported as zero.

Similarly, an efficiency of zero must be reported for any waste treatment method(s) that does not destroy, chemically convert or physically remove the EPCRA section 313 chemical from the waste stream.

For metal category compounds, the calculation of the reportable concentration and waste treatment efficiency must be based on the weight of the parent metal, not on the weight of the metal compound. Metals are not destroyed, only physically removed or chemically converted from one form into another. The waste treatment efficiency reported must represent only physical removal of the parent metal from the waste stream (except for incineration), not the percent chemical conversion of the metal compound. If a listed waste treatment method converts but does not remove a metal (e.g., chromium reduction), the method must be reported with a waste treatment efficiency of zero.

EPCRA section 313 chemicals that are strong mineral acids neutralized to a pH of 6 or above are considered treated at a 100% efficiency.

When calculating waste treatment efficiency and influent chemical concentration, EPCRA section 313(g)(2) requires a facility to use readily available data (including monitoring data) collected pursuant to other provisions of law, or, where such data are not readily available, "reasonable estimates" of the amounts involved.

7A Column e: Based on Operating Data?

This column requires you to indicate "Yes" or "No" to whether the waste treatment efficiency estimate is based on actual operating data. For example, you would check "Yes" if the estimate is based on monitoring of influent and effluent wastes under typical operating conditions.

If the efficiency estimate is based on published data for similar processes or on equipment supplier's literature, or if you otherwise estimated either the influent or effluent waste comparison or the flow rate, check "No."

Section 7B On-Site Energy Recovery Processes

In Section 7B, you must indicate the on-site energy recovery methods used on the reported EPCRA section 313 chemical.

EPA considers an EPCRA section 313 chemical to be combusted for energy recovery if the toxic chemical has a significant heat value and is combusted in an energy recovery device. If a reported EPCRA section 313 chemical is incinerated on-site but does not contribute energy to the process (e.g., chlorofluorocarbons), it must be considered

waste treated on-site and reported in Section 7A. Metals and metal category compounds cannot be combusted for energy recovery and should NOT be reported in this section. Do not include the combustion of fuel oils, such as fuel oil #6, in this section. Energy recovery may take place only in an industrial kiln, furnace, or boiler.

NA vs. a Numerical Value (e.g., Zero). If you do not perform on-site energy recovery for a waste stream that contains or contained the EPCRA section 313 chemical, check the NA box at the top of Section 7B and enter NA in Section 8.2. If you perform on-site energy recovery for the waste stream that contains or contained the EPCRA section 313 chemical, enter the appropriate code in Section 7B and enter the appropriate value in Section 8.2. If this quantity is less than or equal to 0.5 pound, round to zero (unless the chemical is a listed PBT chemical) and enter zero in 8.2. (Note: for metals and metal compounds, you should only report NA in Sections 7B and Section 8.2.)

Energy Recovery Codes

- U01 Industrial Kiln
- U02 Industrial Furnace
- U03 Industrial Boiler
- U09 Other Energy Recovery Methods

If your facility uses more than one on-site energy recovery method for the reported EPCRA section 313 chemical, list the methods used in descending order (greatest to least) based on the amount of the EPCRA section 313 chemical entering such methods.

Section 7C On-Site Recycling Processes

In Section 7C, you must report the recycling methods used on the EPCRA section 313 chemical.

In this section, use the codes below to report only the recycling methods in place at your facility that are applied to the EPCRA section 313 chemical. Do not list any off-site recycling activities. (Information about off-site recycling must be reported in Part II, Section 6, "Transfers of the Toxic Chemical in Wastes to Off-Site Locations.")

NA vs. a Numerical Value (e.g., Zero). If you do not perform on-site recycling for the reported EPCRA section 313 chemical, check the NA box at the top of Section 7C and enter NA in Section 8.4. If you perform on-site recycling for the reported EPCRA section 313 chemical, enter the appropriate code in Section 7C and enter the appropriate value in Section 8.4. If this quantity is less than or equal to 0.5 pound, round to zero (unless the chemical is a listed PBT chemical) and enter 0 in Section 8.4.

On-Site Recycling Codes

- R11 Solvents/Organics Recovery — Batch Still Distillation
- R12 Solvents/Organics Recovery — Thin-Film Evaporation
- R13 Solvents/Organics Recovery — Fractionation
- R14 Solvents/Organics Recovery — Solvent Extraction
- R19 Solvents/Organics Recovery — Other
- R21 Metals Recovery — Electrolytic
- R22 Metals Recovery — Ion Exchange
- R23 Metals Recovery — Acid Leaching
- R24 Metals Recovery — Reverse Osmosis
- R26 Metals Recovery — Solvent Extraction
- R27 Metals Recovery — High Temperature
- R28 Metals Recovery — Retorting
- R29 Metals Recovery — Secondary Smelting
- R30 Metals Recovery — Other
- R40 Acid Regeneration
- R99 Other Reuse or Recovery

If your facility uses more than one on-site recycling method for an EPCRA section 313 chemical, enter the codes in the space provided in descending order (greatest to least) based on the volume of the reported EPCRA section 313 chemical recovered by each process. If your facility uses more than ten separate methods for recycling the reported EPCRA section 313 chemical on-site, then list the ten activities that recover the greatest amount of the EPCRA section 313 chemical (again, in descending order).

Example 17: On-Site Waste Treatment

A process at the facility generates a wastewater stream containing an EPCRA section 313 chemical (chemical A). A second process generates a wastewater stream containing two EPCRA section 313 chemicals, a metal (chemical B) and a mineral acid (chemical C). Thresholds for all three chemicals have been exceeded and you are in the process of completing separate Form Rs for each chemical.

These two wastewater streams are combined and sent to an on-site wastewater treatment system before being discharged to a POTW. This system consists of an oil/water separator that removes 99% of chemical A; a neutralization tank in which the pH is adjusted to 7.5, thereby destroying 100% of the mineral acid (chemical C); and a settling tank where 95% of the metal (chemical B) is removed from the water (and eventually landfilled off-site).

Section 7A should be completed slightly differently when you file the Form R for each of the chemicals. The table accompanying this example shows how Section 7A should be completed for each chemical. First, on each Form R you should identify the type of waste stream in Section 7A.1a as wastewater (aqueous waste, code W). Next, on each Form R you should list the code for each of the treatment steps that is applied to the entire waste stream, regardless of whether the operation affects the chemical for which you are completing the Form R (for instance, the first four blocks of Section 7A.1b of all three Form Rs should show: P19 (liquid phase separation), C11 (neutralization), P11 (settling/clarification), and N/A (to signify the end of the treatment system). Note that Section 7A.1b is not chemical specific. It applies to the entire waste stream being treated. Section 7A.1c of each Form R should show the concentration of the specific chemical in the influent to the first step of the process (oil/water separation). For this example, assume chemicals A, B, and C are all present at concentrations greater than 1%. Therefore, code "1" should be entered. Section 7A.1d applies to the efficiency of the entire system in destroying and/or removing the chemical for which you are preparing the Form R. You should enter 99% when filing for chemical A, 95% for chemical B, and 100% for chemical C. Finally, you should report whether the influent concentration and efficiency estimates are based on operating data for each chemical, as appropriate.

| Chemical A | | | | | | | |
|------------|---------------|---------------|---------------|----------|--------------|----------|------|
| 7A.1a | 7A.1b | 1. <u>P19</u> | 2. <u>C11</u> | 7A.1c | 7A.1d | 7A.1e | |
| <u>W</u> | 3. <u>P11</u> | 4. <u>N/A</u> | 5. _____ | <u>1</u> | <u>99</u> % | Yes | No |
| | 6. _____ | 7. _____ | 8. _____ | | | <u>X</u> | ____ |
| Chemical B | | | | | | | |
| 7A.1a | 7A.1b | 1. <u>P19</u> | 2. <u>C11</u> | 7A.1c | 7A.1d | 7A.1e | |
| <u>W</u> | 3. <u>P11</u> | 4. <u>N/A</u> | 5. _____ | <u>1</u> | <u>95</u> % | Yes | No |
| | 6. _____ | 7. _____ | 8. _____ | | | <u>X</u> | ____ |
| Chemical C | | | | | | | |
| 7A.1a | 7A.1b | 1. <u>P19</u> | 2. <u>C11</u> | 7A.1c | 7A.1d | 7A.1e | |
| <u>W</u> | 3. <u>P11</u> | 4. <u>N/A</u> | 5. _____ | <u>1</u> | <u>100</u> % | Yes | No |
| | 6. _____ | 7. _____ | 8. _____ | | | <u>X</u> | ____ |

Note that the *quantity* removed and/or destroyed is not reported in Section 7 and that the efficiency reported in Section 7A.1d refers to the amount of EPCRA section 313 chemical destroyed *and/or removed* from the applicable waste stream. The amount actually destroyed should be reported in Section 8.6 (quantity treated on-site). For example, when completing the Form R for Chemical B you should report "0" pounds in Section 8.6 because the metal has been removed from the wastewater stream, but not actually destroyed. The quantity of Chemical B that is ultimately landfilled off-site should be reported in Sections 6.2 and 8.1. However, when completing the Form R for Chemical C you should report the entire quantity in Section 8.6 because raising the pH to 7.5 will completely destroy the mineral acid.

Example 18: Reporting On-Site Energy Recovery

One waste stream generated by your facility contains, among other chemicals, toluene and Freon 113. Threshold quantities are exceeded for both of these EPCRA section 313 chemicals, and you would, therefore, submit two separate Form R reports. This waste stream is sent to an on-site industrial furnace that uses the heat generated in a thermal hydrocarbon cracking process at your facility. Because toluene has a significant heat value (17,440 BTU/pound) and the energy is recovered in an industrial furnace, the code "U02" would be reported in Section 7B for the Form R submitted for toluene.

However, as Freon 113 does not contribute any value for energy recovery purposes, the combustion of Freon 113 in the industrial furnace is considered waste treatment, not energy recovery. You would report Freon 113 as entering a waste treatment step (i.e., incineration), in Section 7A, column b. In Section 7B the facility should report zero.

Do not enter the values in Section 8 in gallons, tons, liters, or any measure other than pounds. You must also enter the values as whole numbers. Numbers following a decimal point are not acceptable for toxic chemicals other than those designated as PBT chemicals. For PBT chemicals facilities should report release and other waste management quantities greater than 0.1 pound (except the dioxin and dioxin-like compounds category) provided the accuracy and the underlying data on which the estimate is based supports this level of precision. For the dioxin and dioxin-like compounds category facilities should report at a level of precision supported by the accuracy of the underlying data and the estimation techniques on which the estimate is based. However, the smallest quantity that need be reported on the Form R for the dioxin and dioxin-like compounds category is 0.0001 grams (See example 12 on page 40). Notwithstanding the numeric precision used when determining reporting eligibility thresholds, facilities should report on Form R to the level of accuracy that their data supports, up to seven digits to the right of the decimal. EPA's reporting software and data management systems support data precision to seven digits to the right of the decimal.

Section 8. Source Reduction and Recycling Activities

This section includes the data elements mandated by section 6607 of the Pollution Prevention Act of 1990 (PPA).

In Section 8, you must provide information about source reduction activities and quantities of the EPCRA section 313 chemicals managed as waste. For all appropriate questions, report only the quantity, in pounds, of the reported EPCRA section 313 chemical itself (except the dioxin and dioxin-like compound category). Do not include the weight of water, soil, or other waste constituents. When reporting on the metal category compounds, you should report only the amount of the metal portion of the compound as you do when estimating release amounts.

Sections 8.1 through 8.9 must be completed for each EPCRA section 313 chemical. Section 8.10 must be completed only if a source reduction activity was newly implemented specifically (in whole or in part) for the reported EPCRA section 313 chemical during the reporting year. Section 8.11 allows you to indicate if you have attached additional optional information on source reduction, recycling, or pollution control activities implemented at any time at your facility.

Sections 8.1 through 8.7 require reporting of quantities for the current reporting year, the prior year, and quantities anticipated in both the first year immediately following the reporting year and the second year following the reporting year (future estimates).

NA vs. a Numeric Value (e.g., Zero). You should enter a numeric value in the relevant sections of Section 8 if your facility has released, treated, combusted for energy recovery or recycled any quantity of an EPCRA section 313 chemical during the reporting year. If the aggregate quantity of that toxic chemical was equal to or less than 0.5 pound for a particular waste management method, you should enter the value zero (unless the chemical is a PBT chemical) in the relevant section.

However, if there has been no on-site or off-site treatment, combustion for energy recovery or recycling on the waste stream containing the EPCRA section 313 chemical, then you should enter NA in the relevant section. (Note: for metals and metal category compounds, you should enter NA in Sections 8.2, 8.3, 8.6 and 8.7, as treatment and combustion for energy recovery generally are not applicable waste management methods for metals and metal compounds). For Section 8.1, NA generally is not applicable recognizing the potential for spills, leaks, or fugitive emissions of the EPCRA section 313 chemical. You should enter NA in section 8.8 if there were no remedial actions, catastrophic events such as earthquakes, fires, or floods or one-time events not associated with normal or routine production processes for that toxic chemical. If there was a catastrophic event at your facility, but you were able to prevent any releases from occurring, then enter zero in Section 8.8.

Column A: Prior Year

Quantities for Sections 8.1 through 8.7 must be reported for the year immediately preceding the reporting year in column A. For reports due July 1, 2003 (reporting year 2002), the prior year is 2001. Information available at the facility that may be used to

estimate the prior year's quantities include the prior year's Form R submission, supporting documentation, and recycling, energy recovery, treatment, or disposal operating logs or invoices.

Column B: Current Reporting Year

Quantities for Sections 8.1 through 8.7 must be reported for the current reporting year in column B.

Columns C and D: Following Year and Second Following Year

Quantities for Sections 8.1 through 8.7 must be estimated for 2003 and 2004. EPA expects reasonable future quantity estimates using a logical basis. Information available at the facility to estimate quantities of the chemical expected during these years include planned source reduction activities, market projections, expected contracts, anticipated new product lines, company growth projections, and production capacity figures. Respondents should take into account protections available for trade secrets as provided in EPCRA section 322 (42 USC 11042) for the chemical identity.

Relationship to Other Laws

The reporting categories for quantities recycled, used for energy recovery, treated, and disposed apply to completing Section 8 of Form R as well as to the rest of Form R. These categories are to be used only for TRI reporting. They are not intended for use in determining, under the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations, whether a secondary material is a waste when recycled. These definitions also do not apply to the information that may be submitted in the Biennial Report required under RCRA. In addition, these definitions do not imply any future redefinition of RCRA terms and do not affect EPA's RCRA authority or authority under any other statute administered by EPA.

Differences in terminology and reporting requirements for EPCRA section 313 chemicals reported on Form R and for hazardous wastes regulated under RCRA occur because EPCRA and the PPA focus on specific chemicals, while the RCRA regulations and the Biennial Report focus on waste streams that may include more than one chemical. For example, a RCRA hazardous waste containing an EPCRA section 313 chemical is recycled to recover certain constituents of that waste, but not the toxic chemical reported under EPCRA section 313. The EPCRA section 313 chemical simply passes through the recycling process and remains in the residual from the recycling process, which is disposed. While the waste may be considered recycled under RCRA, the EPCRA section 313 chemical constituent would be considered to be disposed for TRI purposes.

Quantities Reportable in Sections 8.1–8.7

Section 8 of Form R uses data collected to complete Part II, Sections 5 through 7. For this reason, Section 8 should be completed last. Sections 8.1, 8.3, 8.5, 8.7, and 8.8 use data collected to complete sections 5 and 6 of Form R. The relationship between sections 5, 6, and 8.8 to sections 8.1, 8.3, 8.5, and 8.7 are provided below in equation form.

Section 8.1. Report releases pursuant to EPCRA section 329(8) including “any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing [on-site or off-site] into the environment (including the abandonment of barrels, containers, and other closed receptacles).” This includes on-site releases in section 5 and off-site releases in section 6 (releases plus transfers to disposal and transfers to POTWs of metals and metal compounds), but excludes quantities reported in Section 5 and 6 due to remedial actions, catastrophic events, or non-production related events (see the discussion on section 8.8.)

Example 19: Reporting Future Estimates

A pharmaceutical manufacturing facility uses an EPCRA section 313 chemical in the manufacture of a prescription drug. During the reporting year (2002), the company received approval from the Food and Drug Administration to begin marketing their product as an over-the-counter drug beginning in 2003. This approval is publicly known and does not constitute confidential business information. As a result of this expanded market, the company estimates that sales and subsequent production of this drug will increase their use of the reported EPCRA section 313 chemical by 30% per year for the two years following the reporting year. The facility treats the EPCRA section 313 chemical on-site and the quantity treated is directly proportional to production activity. The facility thus estimates the total quantity of the reported EPCRA section 313 chemical treated for the following year (2003) by adding 30% to the amount in column B (the amount for the current reporting year). The second following year (2004) figure can be calculated by adding an additional 30% to the amount reported in column C (the amount for the following year (2003) projection).

Metals and metal category compounds reported, 1) in section 6.2 as sent off-site for stabilization/solidification (M41—metals) or wastewater treatment (excluding POTWs) (M62—metals) and/or, 2) in section 6.1 — discharges to POTWs should be reported in section 8.1. These quantities should NOT be reported in section 8.7 because the metals are ultimately disposed.

§ 8.1 = § 5 + § 6.2 (disposal) + § 6.1 (metals and metal category compounds) - §8.8 (on-site release or off-site disposal due to catastrophic events)¹

If you know that a chemical is not treated for destruction at the POTW you should report that quantity in Section 8.1

Sections 8.2 and 8.3. These relate to an EPCRA section 313 chemical or a mixture containing an EPCRA section 313 chemical that is used for energy recovery on-site or is sent off-site for energy recovery, unless it is a commercially available fuel (e.g., fuel oil no. 6). For the purposes of reporting on Form R, reportable on-site and off-site energy recovery is the combustion of a waste stream containing an EPCRA section 313 chemical when:

- (a) The combustion unit is integrated into an energy recovery system (i.e., industrial furnaces, industrial kilns, and boilers); and
- (b) The EPCRA section 313 chemical is combustible and has a significant heating value (e.g., 5000 BTU)

Note: Metals and metal category compounds cannot be combusted for energy recovery. For metals and metal category compounds, you should enter NA in Sections 8.2 and 8.3.

§ 8.2 is reported in section 8 only

§ 8.3 = § 6.2 (energy recovery) – §8.8 (off-site energy recovery due to catastrophic events)¹

Sections 8.4 and 8.5. These relate to an EPCRA section 313 chemical in a waste that is recycled on-site or is sent off-site for recycling.

§ 8.4 is reported in section 8 only

§ 8.5 = § 6.2 (recycling) – § 8.8 (off-site recycling due to catastrophic events)¹

Section 8.6 and 8.7. These relate to an EPCRA section 313 chemical (except for most metals and metal category compounds) or a waste containing an EPCRA section 313 chemical that is treated for destruction on-site or is sent to a POTW or other off-site location for treatment for destruction. Most metal and category compounds are not reported in this section because they cannot be destroyed.

§ 8.6 is reported in section 8 only

§ 8.7 = § 6.1 (excluding most metal/metal category compounds) + § 6.2 (treatment) – § 8.8 (off-site treatment due to catastrophic events)¹

If you know that a chemical is not treated for destruction at the POTW you should report that quantity in Section 8.1 instead of 8.7.

An EPCRA section 313 chemical or an EPCRA section 313 chemical in a mixture that is a waste under RCRA must be reported in Sections 8.1 through 8.7.

8.8 Quantity Released to the Environment as a Result of Remedial Actions, Catastrophic Events, or One-Time Events Not Associated with Production Processes

In Section 8.8, enter the total quantity of the EPCRA section 313 chemical released directly into the environment or sent off-site for recycling, energy recovery, treatment, or disposal during the reporting year due to any of the following events:

- (1) remedial actions;
- (2) catastrophic events such as earthquakes, fires, or floods; or
- (3) one-time events not associated with normal or routine production processes.

These quantities should not be included in Section 8.1.

The purpose of this section is to separate quantities recycled, used for energy recovery, treated, or released, including disposal that are associated with normal or routine production operations from those that are not. While all quantities released recycled, combusted for energy recovery, or treated may ultimately be preventable, this section separates the quantities that are more likely to be reduced or eliminated by process-oriented source reduction activities from those releases that are largely unpredictable and are less amenable to such source reduction activities. For example, spills that occur as a routine part of production operations and could be reduced or eliminated by improved handling, loading, or unloading procedures are included in the quantities reported in Section 8.1 through 8.7 as appropriate. A total loss of containment resulting from a tank rupture caused by a tornado would be included in the quantity reported in Section 8.8.

Similarly, the amount of an EPCRA section 313 chemical cleaned up from spills resulting from normal operations during the reporting year would be included in the quantities reported in Sections 8.1 through 8.7. However, the quantity of the reported EPCRA section 313 chemical disposed from a remedial action (e.g., RCRA corrective action) to clean up the environmental contamination resulting from past practices

¹§8.8 includes quantities of toxic chemicals released onsite or managed as a waste off site due to remedial actions, catastrophic events, or one time events not associated with the production process.

should be reported in Section 8.8 because they cannot currently be addressed by source reduction methods. A remedial action for purposes of Section 8.8 is a waste cleanup (including RCRA and CERCLA operations) within the facility boundary. Most remedial activities involve collecting and treating contaminated material.

Also, releases caused by catastrophic events are to be incorporated into the quantity reported in Section 8.8. Such releases may be caused by natural disasters (e.g., hurricanes and earthquakes) or by large-scale accidents (e.g., fires and explosions). In addition, releases due to one-time events not associated with production (e.g., terrorist bombing) are to be included in Section 8.8. These amounts are not included in the quantities reported in Section 8.1 through 8.7 because such releases are generally unanticipated and cannot be addressed by routine process-oriented accident prevention techniques. By checking your documentation for calculating estimates made for Part II, Section 5, "Quantity of the Toxic Chemical Entering Each Environmental Medium On-site," you may be able to identify release amounts from the above sources. Emergency notifications under CERCLA and EPCRA as well as accident histories required under the Clean Air Act may provide useful information. You should also check facility incident reports and maintenance records to identify one-time or catastrophic events.

Note: While the information reported in Section 8.8 represents only remedial, catastrophic, or one-time events not associated with production processes, Section 5 of Form R (on-site releases to the environment) and Section 6 (off-site transfers for further waste management) must include all on-site releases and transfers for disposal as appropriate, regardless of whether they arise from catastrophic, remedial, or routine process operations.

Avoid Double-Counting in Sections 8.1 Through 8.8

Do not double- or multiple-count quantities in Sections 8.1 through 8.8. The quantities reported in each of those sections should be mutually exclusive. Do not multiple-count quantities entering sequential reportable activities during the reporting year.

Do not include in Sections 8.1 through 8.7 any quantities of the EPCRA section 313 chemical released into the environment or otherwise managed as waste off site due to remedial actions; catastrophic events such as earthquakes, fires, or floods; or unanticipated one-time events not associated with the production process such as a drunk driver crashing his/her car into a drum storage area. These quantities should be reported in Section 8.8 only. For example, 10,000 pounds of diaminoanisoole sulfate is released due to a catastrophic event and is subsequently treated off-site. The 10,000 pounds is reported in Section 8.8 but the amount subsequently treated off-site is not reported in Section 8.7.

8.9 Production Ratio or Activity Index

For Section 8.9, you must provide a ratio of reporting year production to prior year production, or provide an "activity index" based on a variable other than production that is the primary influence on the quantity of the reported EPCRA section 313 chemical recycled, used for energy recovery, treated, or released. The ratio or index must be reported to the nearest tenths or hundredths place (i.e., one or two digits to the right of the decimal point). For EPCRA section 313 PBT chemicals, including the dioxin and dioxin-like compounds category, you will report the same as for chemicals that are not listed as PBT (i.e., up to one or two digits to the right of the decimal point). If the manufacture, processing, or use of the reported EPCRA section 313 chemical began during the current reporting year, enter NA as the production ratio or activity index. Note, this is not to be reported as a percent (i.e., report 1.10 for a 10% increase, not 110%).

It is important to realize that if your facility reports more than one reported EPCRA section 313 chemical, the production ratio or activity index may vary for different chemicals. For facilities that manufacture reported EPCRA section 313 chemicals, the quantities of the EPCRA section 313 chemical(s) produced in the current and prior years provide a good basis for the ratio because that is the primary business activity associated with the reported EPCRA section 313 chemical(s). In most cases, the production ratio or activity index must be based on some variable of production or activity rather than on EPCRA section 313 chemical or material usage. Indices based on EPCRA section 313 chemical or material usage may reflect the effect of source reduction activities rather than changes in business activity. EPCRA section 313 chemical or material usage is therefore not a basis to be used for the production ratio or activity index where the EPCRA section 313 chemical is "otherwise-used" (i.e., non-incorporative activities such as extraction solvents, metal degreasers, etc.).

While several methods are available to the facility for determining this data element, the production ratio or activity index must be based on the variable that most directly affects the quantities of the EPCRA section 313 chemical recycled, used for energy recovery, treated, or released. Examples of methods available include:

Example 20: Quantity Released to the Environment as a Result of Remedial Actions, Catastrophic Events, or One-Time Events Not Associated with Production Processes.

A chemical manufacturer produces an EPCRA section 313 chemical in a reactor that operates at low pressure. The reactants and the EPCRA section 313 chemical product are piped in and out of the reactor at monitored and controlled temperatures. During normal operations, small amounts of fugitive emissions occur from the valves and flanges in the pipelines.

Due to a malfunction in the control panel (which is state-of-the-art and undergoes routine inspection and maintenance), the temperature and pressure in the reactor increase, the reactor ruptures, and the EPCRA section 313 chemical is released. Because the malfunction could not be anticipated and, therefore, could not be reasonably addressed by specific source reduction activities, the amount released is included in Section 8.8. In this case, much of the EPCRA section 313 chemical is released as a liquid and pools on the ground. It is estimated that 1,000 pounds of the EPCRA section 313 chemical pooled on the ground and was subsequently collected and sent off-site for treatment. In addition, it is estimated that another 200 pounds of the EPCRA section 313 chemical vaporized directly to the air from the rupture. The total amount reported in Section 8.8 is the 1,000 pounds that pooled on the ground (and subsequently sent off-site), plus the 200 pounds that vaporized into the air, a total of 1,200 pounds. The quantity sent off-site must also be reported in Section 6 (but not in Section 8.7) and the quantity that vaporized must be reported as a fugitive emission in Section 5 (but not in Section 8.1).

Example 21: Avoiding Double-Counting Quantities in Sections 8.1 through 8.7

5,000 pounds of an EPCRA section 313 chemical enters a treatment operation. Three thousand pounds of the EPCRA section 313 chemical exits the treatment operation and then enters a recycling operation. Five hundred pounds of the EPCRA section 313 chemical are in residues from the recycling operation that is subsequently sent off-site for disposal. These quantities would be reported as follows in Section 8:

Section 8.1: 500 pounds disposed
 Section 8.4: 2,500 pounds recycled
 Section 8.6: 2,000 pounds treated (5,000 that initially entered — 3,000 that subsequently entered recycling)

To report that 5,000 pounds were treated, 3,000 pounds were recycled, and that 500 pounds were sent off-site for disposal would result in over-counting the quantities of EPCRA section 313 chemical recycled, treated, and disposed by 3,500 pounds.

- (1) Amount of EPCRA section 313 chemical manufactured in 2002 divided by the amount of EPCRA section 313 chemical manufactured in 2001; or
- (2) Amount of product produced in 2002 divided by the amount of product produced in 2001.

8.10 Did Your Facility Engage in Any Source Reduction Activities for This Chemical During the Reporting Year?

Section 8.10 must be completed only if a source reduction activity was newly implemented specifically (in whole or in part) for the reported EPCRA section 313 chemical during the reporting year. If your facility engaged in any source reduction activity for the reported EPCRA section 313 chemical during the reporting year, report the activity that was implemented and the method used to identify the opportunity for the activity implemented. If your facility did not engage in any source reduction activity for the reported EPCRA section 313 chemical, enter NA in Section 8.10.1 and answer Section 8.11.

Source reduction means any practice that:

- Reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, energy recovery, treatment, or disposal; and
- Reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The term includes equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control.

The term source reduction does not include any practice that alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity that itself is not integral to and

Instructions for Completing Part II of EPA Form R

necessary for the production of a product or the providing of a service.

Source reduction activities do not include recycling, using for energy recovery, treating, or disposing of an EPCRA section 313 chemical. Report in this section only the source reduction activities implemented to reduce or eliminate the quantities reported in Sections 8.1 through 8.7. The focus of the section is only those activities that are applied to reduce routine or reasonably anticipated releases and quantities of the reported EPCRA section 313 chemical recycled, treated, used for energy recovery, or disposed. Do not report in this section any activities taken to reduce or eliminate the quantities reported in Section 8.8. If you have fewer than four source reduction codes in Section 8.10, an NA should be placed in the first column of the first unused row to indicate the termination of the sequence. If all four rows are used, there is no need to terminate the sequence. If there are more than four source reduction codes, photocopy page 5 of Form R as many times as necessary and then number the boxes consecutively for each source reduction activity. Enter NA when the sequence has terminated, unless the sequence ends at 4, 8, 12, 16, etc. source reduction codes.

Source Reduction Activities

You must enter in the first column of Section 8.10, "Source Reduction Activities," the appropriate code(s) indicating the type of actions taken to reduce the amount of the reported EPCRA section 313 chemical released (as reported in Section 8.1), used for energy recovery (as reported in Sections 8.2–8.3), recycled (as reported in Sections 8.4–8.5), or treated (as reported in Sections 8.6–8.7). The list of codes below includes many, but not all, of the codes provided in the RCRA biennial report. Remember that source reduction activities include only those actions or techniques that reduce or eliminate the amounts of the EPCRA section 313 chemical reported in Sections 8.1 through 8.7. Actions taken to recycle, combust for energy recovery, treat, or dispose of the EPCRA section 313 chemical are not considered source reduction activities.

Source Reduction Activity Codes:

Good Operating Practices

- W13 Improved maintenance scheduling, record keeping, or procedures
- W14 Changed production schedule to minimize equipment and feedstock changeovers
- W19 Other changes made in operating practices

Inventory Control

- W21 Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life
- W22 Began to test outdated material — continue to use if still effective

- W23 Eliminated shelf-life requirements for stable materials
- W24 Instituted better labeling procedures
- W25 Instituted clearinghouse to exchange materials that would otherwise be discarded
- W29 Other changes made in inventory control

Spill and Leak Prevention

- W31 Improved storage or stacking procedures
- W32 Improved procedures for loading, unloading, and transfer operations
- W33 Installed overflow alarms or automatic shut-off valves
- W35 Installed vapor recovery systems
- W36 Implemented inspection or monitoring program of potential spill or leak sources
- W39 Other changes made in spill and leak prevention

Raw Material Modifications

- W41 Increased purity of raw materials
- W42 Substituted raw materials
- W49 Other raw material modifications made

Process Modifications

- W51 Instituted re-circulation within a process
- W52 Modified equipment, layout, or piping
- W53 Used a different process catalyst
- W54 Instituted better controls on operating bulk containers to minimize discarding of empty containers
- W55 Changed from small volume containers to bulk containers to minimize discarding of empty containers
- W58 Other process modifications made

Cleaning and Decreasing

- W59 Modified stripping/cleaning equipment
- W60 Changed to mechanical stripping/cleaning devices (from solvents or other materials)
- W61 Changed to aqueous cleaners (from solvents or other materials)
- W63 Modified containment procedures for cleaning units
- W64 Improved draining procedures
- W65 Redesigned parts racks to reduce drag out
- W66 Modified or installed rinse systems
- W67 Improved rinse equipment design
- W68 Improved rinse equipment operation
- W71 Other cleaning and decreasing modifications made

Example 22: Determining a Production Ratio

Your facility's only use of toluene is as a paint carrier for a painting operation. You painted 12,000 refrigerators in the current reporting year and 10,000 refrigerators during the preceding year. The production ratio for toluene in this case is 1.2 (12,000/10,000) because the number of refrigerators produced is the primary factor determining the quantity of toluene to be reported in Sections 8.1 through 8.7.

A facility manufactures inorganic pigments, including titanium dioxide. Hydrochloric acid (acid aerosols) is produced as a waste byproduct during the production process. An appropriate production ratio for hydrochloric acid (acid aerosols) is the annual titanium dioxide production, not the amount of byproduct generated. If the facility produced 20,000 pounds of titanium dioxide during the reporting year and 26,000 pounds in the preceding year, the production ratio would be 0.77 (20,000/26,000).

Example 23: Determining an Activity Index

Your facility manufactures organic dyes in a batch process. Different colors of dyes are manufactured, and between color changes, all equipment must be thoroughly cleaned with solvent containing glycol ethers to reduce color carryover. During the preceding year, the facility produced 2,000 pounds of yellow dye in January, 9,000 pounds of green dye for February through September, 2,000 pounds of red dye in November, and another 2,000 pounds of yellow dye in December. This adds up to a total of 15,000 pounds and four color changeovers. During the reporting year, the facility produced 10,000 pounds of green dye during the first half of the year and 10,000 pounds of red dye in the second half. If your facility uses glycol ethers in this cleaning process only, an activity index of 0.5 (based on two color changeovers for the reporting year divided by four changeovers for the preceding year) is more appropriate than a production ratio of 1.33 (based on 20,000 pounds of dye produced in the current year divided by 15,000 pounds in the preceding year). In this case, an activity index, rather than a production ratio, better reflects the factors that influence the amount of solvent recycled, used for energy recovery, treated, or released.

A facility that manufactures thermoplastic composite parts for aircraft uses toluene as a wipe solvent to clean molds. The solvent is stored in 55-gallon drums and is transferred to 1-gallon dispensers. The molds are cleaned on an as-needed basis that is not necessarily a function of the parts production rate. Operators cleaned 5,200 molds during the reporting year, but only cleaned 2,000 molds in the previous year. An activity index of 2.6 (5,200/2,000) represents the activities involving toluene usage in the facility. If the molds were cleaned after 1,000 parts were manufactured, a production ratio would equal the activity index and either could be used as the basis for the index.

A facility manufactures surgical instruments and cleans the metal parts with 1,1,1-trichloromethane in a vapor degreaser. The degreasing unit is operated in a batch mode and the metal parts are cleaned according to an irregular schedule. The activity index can be based upon the total time the metal parts are in the degreasing operation. If the degreasing unit operated 3,900 hours during the reporting year and 3,000 hours the prior year, the activity index is 1.3 (3,900/3,000).

Example 24: "NA" is Entered as the Production Ratio or Activity Index

Your facility began production of semiconductor chips during this reporting year. Perchloroethylene is used as a cleaning solvent for this operation and this is the only use of the EPCRA section 313 chemical in your facility. You would enter NA in Section 8.9 because you have no basis of comparison in the prior year for the purposes of developing the activity index.

Example 25: Determining the Production Ratio Based on a Weighted Average

At many facilities, a reported EPCRA section 313 chemical is used in more than one production process. In these cases, a production ratio or activity index can be estimated by weighting the production ratio for each process based on the respective contribution of each process to the quantity of the reported EPCRA section 313 chemical recycled, used for energy recovery, treated, or disposed.

Your facility paints bicycles with paint containing toluene. Sixteen thousand bicycles were produced in the reporting year and 14,500 were produced in the prior year. There were no significant design modifications that changed the total surface area to be painted for each bike. The bicycle production ratio is 1.1 (16,000/14,500). You estimate 12,500 pounds of toluene recycled, used for energy recovery, treated, or released as a result of bicycle production. Your facility also uses toluene as a solvent in a glue that is used to make components and add-on equipment for the bicycles. Thirteen thousand components were manufactured in the reporting year as compared to 15,000 during the prior year. The production ratio for the components using toluene is 0.87 (13,000/15,000). You estimate 1,000 pounds of toluene treated, recycled, used for energy recovery, or released as a result of components production. A production ratio can be calculated by weighting each of the production ratios based on the relative contribution each has to the quantities of toluene treated, recycled, used for energy recovery, or released during the reporting year (13,500 pounds). The production ratio is calculated as follows:

$$\text{Production ratio} = 1.1 \times (12,500/13,500) + 0.87 \times (1,000/13,500) = 1.08$$

Example 26: Source Reduction

A facility assembles and paints furniture. Both the glue used to assemble the furniture and the paints contain EPCRA section 313 chemicals. By examining the gluing process, the facility discovered that a new drum of glue is opened at the beginning of each shift, whether the old drum is empty or not. By adding a mechanism that prevents the drum from being changed before it is empty, the need for disposal of the glue is eliminated at the source. As a result, this activity is considered source reduction. The painting process at this facility generates a solvent waste, that contains an EPCRA section 313 chemical that is collected and recovered. The recovered solvent is used to clean the painting equipment. The recycling activity does not reduce the amount of EPCRA section 313 chemical recycled, and therefore is not considered a source reduction activity.

Surface Preparation and Finishing

- W72 Modified spray systems or equipment
- W73 Substituted coating materials used
- W74 Improved application techniques
- W75 Changed from spray to other system
- W78 Other surface preparation and finishing modifications made

Product Modifications

- W81 Changed product specifications
- W82 Modified design or composition of product
- W83 Modified packaging
- W89 Other product modifications made

Methods to Identify Activity

In columns a through c of Section 8.10, the “Methods to Identify Activity,” you must enter one or more of the following code(s) that correspond to those internal and external method(s) or information sources you used to identify the possibility for a source reduction activity implementation at your facility. If more than three methods were used to identify the source reduction activity, enter only the three codes that contributed most to the decision to implement the activity.

- T01 Internal pollution prevention opportunity audit(s)
- T02 External pollution prevention opportunity audit(s)
- T03 Materials balance audits
- T04 Participative team management
- T05 Employee recommendation (independent of a formal company program)
- T06 Employee recommendation (under a formal company program)
- T07 State government technical assistance program
- T08 Federal government technical assistance program
- T09 Trade association/industry technical assistance program
- T10 Vendor assistance
- T11 Other

8.11 Is Additional Optional Information on Source Reduction, Recycling, or Pollution Control Activities Included with this Report?

Check “Yes” for this data element if you have attached to this report any additional *optional* information on source reduction, recycling, or pollution control activities you have implemented in the reporting year or in prior years for the reported EPCRA

section 313 chemical. If you are not including additional information, check "No." If you submit additional optional information, try to limit this information to one page that summarizes the source reduction, recycling, or pollution control activities. If there is a contact person at the facility, other than the technical or public contact provided in Part I, Section 4, the summary page should include that person's name and telephone number for individuals who wish to obtain further information about those activities. Also submit a copy of this additional information to the appropriate state agency as part of the Form R submittal to that agency.

D. Facility Eligibility Determination for Alternate Threshold and for Reporting on EPA Form A Certification Statement

This section will help to determine whether you can submit the simplified Form A Certification Statement (hereafter referred to as Form A). The criteria are based on the total annual reportable amount of the listed chemical or chemical category and the amount manufactured, processed, or otherwise used.

D.1 Alternate Threshold

On November 30, 1994, EPA published a final rule (59 FR 61488) that provides qualifying facilities an alternate threshold of 1 million pounds. Eligible facilities wishing to take advantage of this option may certify on a simplified two-page form referred to as Form A Certification Statement and do not have to use Form R. The "TRI Alternate Threshold for Facilities with Low Annual Reportable Amounts," provides facilities otherwise meeting EPCRA section 313 reporting thresholds the option of certifying on Form A provided that they do not exceed 500 pounds for the total annual reportable amount (defined below) for that chemical, and that their amounts manufactured or processed or otherwise used do not exceed one-million pounds. As with determining section 313 reporting thresholds, amounts manufactured, processed, or otherwise used are to be considered independently. This modification does not apply to forms being submitted on or before July 1, 1995 (covering the 1994 reporting year). If you fill out a Form A for an EPCRA section 313 chemical, do not fill out a Form R for that same chemical.

However, there is an exception to the alternate threshold rule described in the preceding paragraph. All PBT chemicals (except certain instances of reporting lead in stainless steel, brass or bronze alloys) are excluded from eligibility for the alternate threshold.

D.2 What is the Form A Certification Statement?

The Form A, which is described as the "certification statement" in 59 FR 61488, is intended as a means to reduce the compliance burden associated with EPCRA section 313. The Form A must be submitted on an annual basis for each eligible chemical. Facilities wishing to take advantage of this burden reducing option must submit a Form A for such chemicals meeting the conditions described below, and should not submit a Form R to the TRI Data Processing Center for that chemical. The information submitted on the Form A includes facility identification information and the chemical or chemical category identity. The information submitted on the Form A will appear in the TRI data base in the same manner that information submitted on Form R appears. An approved Form A and a magnetic version of reporting have been included in this Reporting Forms and Instructions package.

D.3 What is the Total Annual Reportable Amount?

For the purpose of this optional reporting modification, the annual reportable amount is equal to the combined total quantities released at the facility (including disposed within the facility), treated at the facility (as represented by amounts destroyed or converted by treatment processes), recovered at the facility as a result of recycle operations, combusted for the purpose of energy recovery at the facility, and amounts transferred from the facility to off-site locations for the purpose of recycle, energy recovery, treatment, and/or disposal. These volumes correspond to the sum of amounts reportable for data elements on EPA Form R (EPA Form 9350-1; Rev. 04/97) as Part II column B of section 8, data elements 8.1 (quantity released), 8.2 (quantity used for energy recovery on-site), 8.3 (quantity used for energy recovery off-site), 8.4 (quantity recycled on-site), 8.5 (quantity recycled off-site), 8.6 (quantity treated on-site), and 8.7 (quantity treated off-site).

D.4 Recordkeeping

Each owner or operator who determines that they are eligible, and wishes to apply the alternate threshold to a particular chemical, must retain records substantiating this determination for a period of three years from the date of the submission of the Form A. These records must include sufficient documentation to support calculations as well as the calculations made by the facility that confirm their eligibility for each chemical for which the alternate threshold was applied.

A facility that fits within the category description, and manufactures, processes or otherwise uses no more than one-million pounds of an EPCRA section 313 chemical annually, and whose owner/operator elects to take advantage of the alternate threshold, is not considered an EPCRA section 313 covered facility for that chemical for the purpose of submitting a Form R. This determination may provide further regulatory relief from other federal or state regulations that apply to facilities on the basis of their EPCRA section 313 reporting status. A facility will need to reference other applicable regulations to determine if their actual requirements may be affected by this reporting modification.

D.5 Multi-establishment Facilities

For the purposes of using Form A, the facility must also make its determination based upon the entire facility's operations including all of its establishments (see 59 FR 61488 for greater detail). If the facility as a whole is able to take advantage of the alternate threshold, a single Form A is required. The eligibility to submit a Form A must be made on a whole facility determination. Thus, all of the information necessary to make the determination must be assembled to the facility level.

D.6 Trade Secrets

When making a trade secret claim on a Form A submission, EPA is requiring that a facility submit a unique Form A for each EPCRA section 313 chemical meeting the conditions of the alternate threshold. Facilities may assert a trade secrecy claim for a chemical identity on the Form A as on the Form R. Reports submitted on a per chemical basis protect against the disclosure of trade secrets. Form As with trade secrecy claims, like Form Rs with similar claims, will be separately handled upon receipt to protect against disclosure. Commingling trade secret chemical identities with non-trade secret chemical identities on the same submission increases the risk of disclosure.

- 3 Do not submit trade secret reports electronically or on diskette.

D.7 Metals and Metal Category Compounds

For metal category compounds, the category level of 500 pounds applies to the amount of parent metal waste that is reported on Form R, but the thresholds apply to the amount of metal category compounds manufactured, processed, or otherwise used. For Form A certification involving both listed parent metals and associated metal compounds, the one million pound alternate threshold must be applied separately to the listed parent metal and the associated metal compound(s). Threshold determinations must be made independently for each because they are separately listed EPCRA section 313 chemicals.

- If the threshold is exceeded for the listed parent metal but not the associated metal category compounds, then the releases of metal reported on Form R for the parent metal need not include the releases from the metal category compounds.
- If both the parent metal and the associated metal compounds exceed the alternate threshold, then the facility has the option of filing one Form R for both, using the metal category compound name and reporting total releases based on parent metal content.

- If neither the parent metal nor the associated metal compounds exceed the alternate threshold, then the facility must use a separate listing on Form A for each, since the reporting thresholds must be applied to each listed parent metal and all compounds in the associated compound category. EPA believes it is appropriate to make this distinction between filing the Form R and Form A because the Form R accounts for amounts of metal released or otherwise managed and Form A verifies that the alternate threshold for each listed chemical or chemical category has not been exceeded.

Similarly, separate listings on Form A must be submitted for all other listed chemicals even if EPA allows one listing on Form R to be filed for two or more listed chemicals, (e.g., o-xylene, p-xylene and xylene (mixed isomers)). For example, if a facility processes in three separate process streams, xylene (mixed isomers), o-xylene, and p-xylene, and exceeds the conditions of the alternate threshold for each of these listed substances, the facility may combine the appropriate information on the o-xylene, p-xylene, and xylene (mixed isomers) into one Form R, but cannot combine the reports into one listing on Form A.

Facilities that process o-xylene, p-xylene, and xylene (mixed isomers) in separate process streams and do not exceed the conditions of the alternate threshold for one or more of the compounds may submit a separate Form A for each of the forms of xylene meeting the alternate threshold and report on Form R for those forms that do not. Similar to reporting on the parent metals and their associated category compounds described above, facilities that separately process all types (i.e., isomers) of xylene with individual activity levels within the conditions of the alternate threshold should file a separate Form A for each type of xylene.

E. Instructions for Completing EPA Form A Certification Statement

Beginning with the 1998 reporting year, facilities may enter as many chemicals as are eligible on a single Form A.

For all parts of Form A:

- " You should type or print information on the form in the format requested and use black ink. (Using blue ink for the certification signature is suggested as a means of indicating its originality.)
- " All information on the Form A is required.
- " Do not leave items in Parts I and II on the Form A blank unless specifically directed to do so; if an item does not apply to you, you should enter NA in the space provided. If your information does not fill all the spaces provided for a type of information, enter NA, in the next blank space in the sequence.
- " Do not submit an incomplete form. The certification statement (Part I, Section 3) specifies that the report is complete as submitted. See page 1 of these instructions for the definition of a complete submission.

Part I. Facility Identification Information

Section 1. Reporting Year

This is the calendar year to which the reported information applies, not the year in which you are submitting the report. Information for the reporting year 2002 must be submitted on or before July 1, 2003.

Section 2. Trade Secret Information

2.1 Are you claiming the EPCRA Section 313 chemical identified on page 2 a trade secret?

If facilities wish to report more than one eligible chemical on the same Form A, then they are not able to make trade secrecy claims. Any trade secrecy claims should be made on a separate form, and then the process is the same as using the Form R and as described in the following instructions.

The specific identity of the EPCRA section 313 chemical being reported in Part II, Section 1, may be designated as a trade secret. If you are making a trade secret claim, mark "yes" and proceed to Section 2.2. Only check "yes" if you manufacture, process, or otherwise use the EPCRA section 313 chemical whose identity is a trade secret. (See page 2 of these instructions for specific information on trade secrecy claims.) If you checked "no," proceed to Section 3; do not answer Section 2.2.

- 3 Do not submit trade secret reports electronically or on diskette.

2.2 If "yes" in 2.1, is this copy sanitized or unsanitized?

You should check "sanitized" if this copy of the report is the public version that does not contain the EPCRA section 313 chemical identity but does contain a generic name in its place, and you have claimed the EPCRA section 313 chemical identity trade secret in Part I, Section 2.1. Otherwise, check "unsanitized."

Section 3. Certification

The Form A must be signed by a senior official with management responsibility for the person (or persons) completing the form. A senior management official must certify the accuracy and completeness of the information reported on the form by signing and dating the Form A. Each report must contain an original signature. Unlike the certification statement contained on Form R, the certification statement provided on the Alternate Threshold Form A pertains to the facility's eligibility of having met the conditions as described in Section D or in the *Federal Register* 59 FR 61488 (November 30, 1994). You should print or type in the space provided the name and title of the person who signs the statement. This certification statement applies to all the information supplied on the form and should be signed only after the form has been completed.

Section 4. Facility Identification

4.1 Facility Name, Location, and TRI Facility Identification Number

Enter the full name that the facility presents to the public and its customers in doing business (e.g., the name that appears on invoices, signs, and other official business documents). Do not use a nickname for the facility (e.g., Main Street Plant) unless that is the legal name of the facility under which it does business. Also enter the street address, mailing address, city, county, state, and zip code in the space provided. Do not use a post office box number as the street address. The street address provided must be the location where the EPCRA section 313 chemicals are manufactured, processed, or otherwise used. If your mailing address and street address are the same, you should enter NA in the space for the mailing address.

If your facility is not in a county, put the name of your city, district (for example District of Columbia), or parish (if you are in Louisiana) in the county block of the Form R and Form A as well as in the County field of *TRI-ME*. "NA" or "None" are not acceptable entries.

If you have submitted a Form A or Form R for previous reporting years, a TRI Facility Identification Number has been assigned to your facility. If you know your TRI Facility Identification Number, complete Section 4. If you do not know

your TRI Facility Identification Number, contact the EPCRA Call Center (see page 7). If your facility has moved, do not enter your TRI facility identification number, you should enter "New Facility."

The TRI Facility Identification Number is established by the first Form R submitted by a facility at a particular location. This identification number is retained by the facility even if the facility changes name, ownership, production processes, SIC codes, etc. This identification number will stay with this location. If a new facility moves to this location it should use this TRI Facility Identification Number. Establishments of a facility that report separately should use the TRI Facility Identification Number of the facility.

You should enter "New Facility" in the space for the TRI Facility Identification number if this is your first submission.

4.2 Federal Facility Designation

Executive Order 13148 directs federal facilities to comply with Right-To-Know Laws and Pollution Prevention Requirements. Please indicate in 4.2.C if the reporting facility is a federal facility or in 4.2.D if the submitter is a contractor at a federal facility (GOCO). If the reporting facility is not a federal facility, you should leave this space blank. Form R allows a facility to report multiple submissions for the same chemical if the facility is composed of several distinct establishments. This data element provides the option of reporting full or partial facility information on Form R, however, this is not applicable for those facilities taking advantage of the Alternate Threshold and Form A. An explanation of this is provided in Section D.

4.3 Technical Contact

Enter the name and telephone number (including area code) of a technical representative whom EPA or state officials may contact for clarification of the information reported on Form A. Beginning in the 2002 reporting year you should also enter an email address for this person. If the technical contact does not have an email address you should enter NA. This contact person does not have to be the same person who prepares the report or signs the Form A and does not necessarily need to be someone at the location of the reporting facility. However, this person should be familiar with the details of the report so that he or she can answer questions about the information provided.

4.4 Intentionally Left Blank

4.5 Standard Industrial Classification (SIC) Code

Enter the appropriate four-digit Standard Industrial Classification (SIC) Code that is the primary SIC Code for your facility in Section 4.5(a). Enter any other applicable SIC Codes for your facility in 4.5 (b)–(f). Table I lists the SIC codes within 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce),

4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis). If the report covers more than one establishment, enter the primary four-digit SIC code for each establishment starting with the primary SIC code for the entire facility. You are required to enter SIC codes only for those establishments within the facilities that fall within SIC codes 10 (except 1011, 1081, and 1094), 12 (except 1241), 20–39, 4911 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4939 (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce), 4953 (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*), 5169, 5171, and 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis). If you do not know your SIC code, consult the 1987 SIC Manual (see section B.2 of these instruction for ordering information).

The North American Industry Classification System (NAICS), is a new economic classification system that will replace the 1987 SIC code system. EPA will address the SIC code change, as it relates to EPCRA, in an upcoming Federal Register notice. This upcoming change does NOT affect the 2002 EPCRA section 313 reporting.

4.6 Latitude and Longitude

Enter the latitude and longitude coordinates of your facility. Sources of these data include EPA permits (e.g., NPDES permits), county property records, facility blueprints, and site plans. Starting with reporting year 2002 you can determine the latitude and longitude of your facility using a siting tool found on the TRI home page. For information on the siting tool and instructions on how to determine these coordinates see Appendix E. Enter only numerical data. Do not preface numbers with letters such as N or W to denote the hemisphere.

Latitude and longitude coordinates of your facility are very important for pinpointing the location of reporting facilities and are required elements on the Form R. EPA encourages facilities to make the best possible measurements when determining latitude and longitude. Please check to make sure the latitude and longitude coordinates of your facility are correct. For the continental United States readings should be within 24°23'58" and 49°22'16" latitude, and 66°53'06" and 124°50'55" longitude. For Alaska readings should be within 51°10'30" and 71°26'04" latitude, and 129°59'29" and 187°39'08" longitude. For Hawaii readings should be within 18°51'56" and 28°30'59" latitude, and 154°45'21" and 178°26'25" longitude. As with any other data field, missing, suspect, or incorrect data may generate an error notice in the Facility Data Profile to be issued to the facility. (See Appendix C)

4.7 Dun & Bradstreet Number(s)

Enter the nine-digit number assigned by Dun & Bradstreet (D & B) for your facility or each establishment within your facility. These numbers code the facility for financial purposes. This number may be available from your facility's treasurer or financial officer. You can also obtain the numbers from your local D & B office (check the telephone book White Pages). If a facility does not subscribe to the D & B service, a number can be obtained, toll free at 800 234-3867 (8:00 AM to 6:00 PM, Local Time) or on the Web at <www.dnb.com>. If none of your establishments has been assigned a D & B number, you should enter NA in box (a). If only some of your establishments have been assigned Dun & Bradstreet numbers, enter those numbers in Part I, section 4.7.

4.8 EPA Identification Number(s)

The EPA Identification Number is a 12-character number assigned to facilities covered by hazardous waste regulations under Resource and Conservation and Recovery Act. Facilities not covered by RCRA are not likely to have an assigned Identification Number. If your facility is not required to have an Identification Number, you should enter NA in box (a). If your facility has been assigned multiple EPA Identification Numbers, you must enter those numbers in the spaces provided in Section 4.8.

4.9 Facility NPDES Permit Number(s)

Enter the numbers of any permits your facility holds under the National Pollutant Discharge Elimination System (NPDES) even if the permit(s) do not pertain to the EPCRA section 313 chemical being reported. This nine-character permit number is assigned to your facility by EPA or the state under the authority of the Clean Water Act. If your facility does not have a permit, you should enter NA in Section 4.9a.

4.10 Underground Injection Well Code (UIC) Identification Number(s)

If your facility has a permit to inject a waste containing the EPCRA section 313 chemical into Class 1 deep wells, enter the 12-digit Underground Injection Well Code (UIC) identification number assigned by EPA or by the state under the authority of the Safe Drinking Water Act. If your facility does not hold such a permit(s), you should enter NA in Section 4.10a. You are required to provide the UIC number for wells that receive the EPCRA section 313 chemical being reported in the current reporting year.

Section 5. Parent Company Information

You must provide information on your parent company. For purposes of the Form A, a parent company is defined as the highest level company, located in the United States, that directly owns at least 50% of the voting stock of your company. If your facility is owned by a foreign entity, you should enter NA in this space. Corporate names should be treated as parent company names for companies with multiple facility sites. For example, the Bestchem Corporation is not owned or controlled by any other corporation but has sites throughout the country whose names begin with Bestchem. In this case, Bestchem Corporation should be listed as the parent company. Note that a facility that is a 50:50 joint venture is its own parent company. When a facility is owned by more than one company and there is no parent company for the entire facility (meaning that none of the facility owners directly owns at least 50 percent of the voting stock of the facility at issue), the facility should provide the name of the parent company of either the facility operator or the owner with the largest ownership interest in the facility. If neither the operator nor this owner has a parent company, then the NA box should be checked.

5.1 Name of Parent Company

Enter the name of the corporation or other business entity that is your ultimate US parent company. If your facility has no parent company, you should check the NA box.

5.2 Parent Company's Dun & Bradstreet Number

Enter the Dun & Bradstreet (D & B) Number for your ultimate US parent company, if applicable. The number may be obtained from the treasurer or financial officer of the company. If your parent company does not have a D & B number, you should check the NA box.

Part II. Chemical Identification

N874 Warfarin and salts
N982 Zinc compounds

Reporting on the Alternate Threshold Form A Certification Statement for metals, metal category compounds, and mixed isomers differs somewhat from Form R reporting. Please refer to Section D for these guidelines.

*Facilities cannot take the alternate threshold for chemicals and chemical categories listed as PBT chemicals.

Section 1. Toxic Chemical Identity

(Important: DO NOT complete this section if you completed Section 2 of Part II below.)

If you are making a trade secret claim, you must report the CAS number or should report the category code on your unsanitized Form A and unsanitized substantiation form. Do not include the CAS number or category code on your sanitized Form A or sanitized substantiation form.

1.1 CAS Number

Enter the Chemical Abstracts Service (CAS) registry number in Section 1.1 exactly as it appears in Table II of these instructions for the chemical being reported. CAS numbers are cross-referenced with an alphabetical list of chemical names in Table II. If you are reporting one of the EPCRA section 313 chemical categories (e.g., chromium compounds), you should enter the applicable category code in the CAS number space. EPCRA section 313 chemical category codes are listed below and can also be found in Table IIc and Appendix B-1.

1.2 EPCRA Section 313 Chemical or Chemical Category Name

Enter the name of the EPCRA section 313 chemical or chemical category exactly as it appears in Table II. If the EPCRA section 313 chemical name is followed by a synonym in (parentheses), report the chemical by the name that directly follows the CAS number (i.e., not the synonym). If the EPCRA section 313 chemical identity is actually a product trade name (e.g., dicofol), the 9th Collective Index name is listed below it in brackets. You may report either name in this case.

EPCRA section 313 Chemical Category Codes

| | |
|------|---|
| N010 | Antimony compounds |
| N020 | Arsenic compounds |
| N040 | Barium compounds |
| N050 | Beryllium compounds |
| N078 | Cadmium compounds |
| N084 | Chlorophenols |
| N090 | Chromium compounds |
| N096 | Cobalt compounds |
| N100 | Copper compounds |
| N106 | Cyanide compounds |
| N120 | Diisocyanates |
| N150 | Dioxin and dioxin-like compounds* |
| N171 | Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) |
| N230 | Certain glycol ethers |
| N420 | Lead compounds* |
| N450 | Manganese compounds |
| N458 | Mercury compounds* |
| N495 | Nickel compounds |
| N503 | Nicotine and salts |
| N511 | Nitrate compounds (water dissociable; reportable only when in aqueous solution) |
| N575 | Polybrominated biphenyls (PBBs) |
| N583 | Polychlorinated alkanes (C10 to C13) |
| N590 | Polycyclic aromatic compounds (PACs)* |
| N725 | Selenium compounds |
| N740 | Silver compounds |
| N746 | Strychnine and salts |
| N760 | Thallium compounds |
| N770 | Vanadium compounds |

Do not list the name of a chemical that does not appear in Table II, such as individual members of an EPCRA section 313 chemical category. For example, if you use silver chloride, do not report silver chloride with its CAS number. Report this chemical as “silver compounds” with its category code N740.

If you are making a trade secret claim, you must report the specific EPCRA section 313 chemical identity on your unsanitized Form A and unsanitized substantiation form. Do not report the name of the EPCRA section 313 chemical on your sanitized Form A or sanitized substantiation form. Include a generic name in Part II, Section 1.3 of your sanitized Form A.

1.3 Generic Chemical Name

Complete Section 1.3 only if you are claiming the specific EPCRA section 313 chemical identity of the EPCRA section 313 chemical as a trade secret and have marked the trade secret block in Part I, Section 2.1 on page 1 of Form A. Enter a generic chemical name that is descriptive of the chemical structure. You should limit the generic name to seventy characters (e.g., numbers, letters, spaces, punctuation) or less. Do not enter mixture names in Section 1.3; see Section 2 below.

In-house plant codes and other substitute names that are not structurally descriptive of the EPCRA section 313 chemical identity being withheld as a trade secret are not acceptable as a generic name. The generic name must appear on both sanitized

and unsanitized Form A, and the name must be the same as that used on your substantiation forms.

Section 2. Mixture Component Identity

Report the generic name provided to you by your supplier in this section if your supplier is claiming the chemical identity proprietary or trade secret. Do not answer “yes” in Part I, Section 2.1 on page 1 of the form if you complete this section. You do not need to supply trade secret substantiation forms for this EPCRA section 313 chemical because it is your supplier who is claiming the chemical identity a trade secret.

2.1 Generic Chemical Name Provided by Supplier

Enter the generic chemical name in this section only if the following three conditions apply:

1. You determine that the mixture contains an EPCRA section 313 chemical but the only identity you have for that chemical is a generic name;
2. You know either the specific concentration of that EPCRA section 313 chemical component or a maximum or average concentration level; and
3. You multiply the concentration level by the total annual amount of the whole mixture processed or otherwise used and determine that you meet the process or otherwise use threshold for that single, generically identified mixture component.

Table I. SIC codes

10 Metal Mining (except 1011, 1081 and 1094)

- 1021 Copper Ores
- 1031 Lead and Zinc Ores
- 1041 Gold Ores
- 1044 Silver Ores
- 1061 Ferroalloy Ores, Except Vanadium
- 1099 Miscellaneous Metal Ores, Not Elsewhere Classified

12 Coal Mining (except 1241)

- 1221 Bituminous Coal and Lignite Surface Mining
- 1222 Bituminous Coal Underground Mining
- 1231 Anthracite Mining

20 Food and Kindred Products

- 2011 Meat packing plants
- 2013 Sausages and other prepared meat products
- 2015 Poultry slaughtering and processing
- 2021 Creamery butter
- 2022 Natural, processed, and imitation cheese
- 2023 Dry, condensed, and evaporated dairy products
- 2024 Ice cream and frozen desserts
- 2026 Fluid milk
- 2032 Canned specialties
- 2033 Canned fruits, vegetables, preserves, jams, and jellies
- 2034 Dried and dehydrated fruits, vegetables, and soup mixes
- 2035 Pickled fruits and vegetables, vegetable sauces and seasonings, and salad dressings
- 2037 Frozen fruits, fruit juices, and vegetables
- 2038 Frozen specialties, n.e.c.*
- 2041 Flour and other grain mill products
- 2043 Cereal breakfast foods
- 2044 Rice milling
- 2045 Prepared flour mixes and doughs
- 2046 Wet corn milling
- 2047 Dog and cat food
- 2048 Prepared feeds and feed ingredients for animals and fowls, except dogs and cats

- 2051 Bread and other bakery products, except cookies and crackers
- 2052 Cookies and crackers
- 2053 Frozen bakery products, except bread
- 2061 Cane sugar, except refining
- 2062 Cane sugar refining
- 2063 Beet sugar
- 2064 Candy and other confectionery products
- 2066 Chocolate and cocoa products
- 2067 Chewing gum
- 2068 Salted and roasted nuts and seeds
- 2074 Cottonseed oil mills
- 2075 Soybean oil mills
- 2076 Vegetable oil mills, n.e.c.*
- 2077 Animal and marine fats and oils
- 2079 Shortening, table oils, margarine, and other edible fats and oils, n.e.c.*
- 2082 Malt beverages
- 2083 Malt
- 2084 Wines, brandy, and brandy spirits
- 2085 Distilled and blended liquors
- 2086 Bottled and canned soft drinks and carbonated waters
- 2087 Flavoring extracts and flavoring syrups, n.e.c.*
- 2091 Canned and cured fish and seafoods
- 2092 Prepared fresh or frozen fish and seafoods
- 2095 Roasted coffee
- 2096 Potato chips, corn chips, and similar snacks
- 2097 Manufactured ice
- 2098 Macaroni, spaghetti, vermicelli, and noodles
- 2099 Food preparations, n.e.c.*

21 Tobacco Products

- 2111 Cigarettes
- 2121 Cigars
- 2131 Chewing and smoking tobacco and snuff
- 2141 Tobacco stemming and redrying

22 Textile Mill Products

- 2211 Broadwoven fabric mills, cotton
- 2221 Broadwoven fabric mills, manmade fiber, and silk
- 2231 Broadwoven fabric mills, wool (including dyeing and finishing)
- 2241 Narrow fabric and other small wares mills: cotton, wool, silk, and manmade fiber

*"Not elsewhere classified" indicated by "n.e.c."

Table I

- 2251 Women's full length and knee length hosiery, except socks
- 2252 Hosiery, n.e.c.*
- 2253 Knit outerwear mills
- 2254 Knit underwear and nightwear mills
- 2257 Weft knit fabric mills
- 2258 Lace and warp knit fabric mills
- 2259 Knitting mills, n.e.c.*
- 2261 Finishers of Broadwoven fabrics of cotton
- 2262 Finishers of Broadwoven fabrics of manmade fiber and silk
- 2269 Finishers of textiles, n.e.c.*
- 2273 Carpets and rugs
- 2281 Yarn spinning mills
- 2282 Yarn texturizing, throwing, twisting, and winding mills
- 2284 Thread mills
- 2295 Coated fabrics, not rubberized
- 2296 Tire cord and fabrics
- 2297 Nonwoven fabrics
- 2298 Cordage and twine
- 2299 Textile goods, n.e.c.*

23 Apparel and Other Finished Products made from Fabrics and Other Similar Materials

- 2311 Men's and boys' suits, coats, and overcoats
- 2321 Men's and boys' shirts, except work shirts
- 2322 Men's and boys' underwear and nightwear
- 2323 Men's and boys' neckwear
- 2325 Men's and boys' separate trousers and slacks
- 2326 Men's and boys' work clothing
- 2329 Men's and boys' clothing, n.e.c.*
- 2331 Women's, misses', and juniors' blouses and shirts
- 2335 Women's, misses', and juniors' dresses
- 2337 Women's, misses', and juniors' suits, skirts, and coats
- 2339 Women's, misses', and juniors', outerwear, n.e.c.*
- 2341 Women's, misses', children's, and infants' underwear and nightwear
- 2342 Brassieres, girdles, and allied garments
- 2353 Hats, caps, and millinery
- 2361 Girls', children's and infants' dresses, blouses, and shirts
- 2369 Girls', children's and infants' outerwear, n.e.c.*
- 2371 Fur goods
- 2381 Dress and work gloves, except knit and all leather
- 2384 Robes and dressing gowns
- 2385 Waterproof outerwear
- 2386 Leather and sheep lined clothing

- 2387 Apparel belts
- 2389 Apparel and accessories, n.e.c.*
- 2391 Curtains and draperies
- 2392 House furnishings, except curtains and draperies
- 2393 Textile bags
- 2394 Canvas and related products
- 2395 Pleating, decorative and novelty stitching, and tucking for the trade
- 2396 Automotive trimmings, apparel findings, and related products
- 2397 Schiffl machine embroideries
- 2399 Fabricated textile products, n.e.c.*

24 Lumber and Wood Products, Except Furniture

- 2411 Logging
- 2421 Sawmills and planing mills, general
- 2426 Hardwood dimension and flooring mills
- 2429 Special product sawmills, n.e.c.*
- 2431 Millwork
- 2434 Wood kitchen cabinets
- 2435 Hardwood veneer and plywood
- 2436 Softwood veneer and plywood
- 2439 Structural wood members, n.e.c.*
- 2441 Nailed and lock corner wood boxes and shook
- 2448 Wood pallets and skids
- 2449 Wood containers, n.e.c.*
- 2451 Mobile homes
- 2452 Prefabricated wood buildings and components
- 2491 Wood preserving
- 2493 Reconstituted wood products
- 2499 Wood products, n.e.c.*

25 Furniture and Fixtures

- 2511 Wood household furniture, except upholstered
- 2512 Wood household furniture, upholstered
- 2514 Metal household furniture
- 2515 Mattresses, foundations, and convertible beds
- 2517 Wood television, radio, phonograph, and sewing machine cabinets
- 2519 Household furniture, n.e.c.*
- 2521 Wood office furniture
- 2522 Office furniture, except wood
- 2531 Public building and related furniture
- 2541 Wood office and store fixtures, partitions, shelving, and lockers
- 2542 Office and store fixtures, partitions, shelving, and lockers, except wood
- 2591 Drapery hardware and window blinds and shades

2599 Furniture and fixtures, n.e.c.*

26 Paper and Allied Products

2611 Pulp mills
 2621 Paper mills
 2631 Paperboard mills
 2652 Setup paperboard boxes
 2653 Corrugated and solid fiber boxes
 2655 Fiber cans, tubes, drums, and similar products
 2656 Sanitary food containers, except folding
 2657 Folding paperboard boxes, including sanitary
 2671 Packaging paper and plastics film, coated and laminated
 2672 Coated and laminated paper, n.e.c.*
 2673 Plastics, foil, and coated paper bags
 2674 Uncoated paper and multiwall bags
 2675 Die-cut paper and paperboard and cardboard
 2676 Sanitary paper products
 2677 Envelopes
 2678 Stationery tablets, and related products
 2679 Converted paper and paperboard products, n.e.c.*

27 Printing, Publishing, and Allied Industries

2711 Newspapers: publishing, or publishing and printing
 2721 Periodicals: publishing, or publishing and printing
 2731 Books: publishing, or publishing and printing
 2732 Book printing
 2741 Miscellaneous publishing
 2752 Commercial printing, lithographic
 2754 Commercial printing, gravure
 2759 Commercial printing, n.e.c.*
 2761 Manifold business forms
 2771 Greeting cards
 2782 Blank books, looseleaf binders and devices
 2789 Bookbinding and related work
 2791 Typesetting
 2796 Plate making and related services

28 Chemicals and Allied Products

2812 Alkalies and chlorine
 2813 Industrial gases
 2816 Inorganic pigments
 2819 Industrial inorganic chemicals, n.e.c.*
 2821 Plastics materials, synthetic resins, and non-vulcanizable elastomers

2822 Synthetic rubber (vulcanizable elastomers)
 2823 Cellulosic manmade fibers
 2824 Manmade organic fibers, except cellulosic
 2833 Medicinal chemicals and botanical products
 2834 Pharmaceutical preparations
 2835 In vitro and in vivo diagnostic substances
 2836 Biological products, except diagnostic substances
 2841 Soap and other detergents, except specialty cleaners
 2842 Specialty cleaning, polishing, and sanitation preparations
 2843 Surface active agents, finishing agents, sulfonated oils, and assistants
 2844 Perfumes, cosmetics, and other toilet preparations
 2851 Paints, varnishes, lacquers, enamels, and allied products
 2861 Gum and wood chemicals
 2865 Cyclic organic crudes and intermediates, and organic dyes and pigments
 2869 Industrial organic chemicals, n.e.c.*
 2873 Nitrogenous fertilizers
 2874 Phosphatic fertilizers
 2875 Fertilizers, mixing only
 2879 Pesticides and agricultural chemicals, n.e.c.*
 2891 Adhesives and sealants
 2892 Explosives
 2893 Printing ink
 2895 Carbon black
 2899 Chemicals and chemical preparations, n.e.c.*

29 Petroleum Refining and Related Industries

2911 Petroleum refining
 2951 Asphalt paving mixtures and blocks
 2952 Asphalt felts and coatings
 2992 Lubricating oils and greases
 2999 Products of petroleum and coal, n.e.c.*

30 Rubber and Miscellaneous Plastics Products

3011 Tires and inner tubes
 3021 Rubber and plastics footwear
 3052 Rubber and plastics hose and belting
 3053 Gaskets, packing, and sealing devices
 3061 Molded, extruded, and lathe cut mechanical rubber products
 3069 Fabricated rubber products, n.e.c.*
 3081 Unsupported plastics film and sheet
 3082 Unsupported plastics profile shapes
 3083 Laminated plastics plate, sheet, and profile shapes
 3084 Plastics pipe

*"Not elsewhere classified" indicated by "n.e.c."

Table I

- 3085 Plastics bottles
- 3086 Plastics foam products
- 3087 Custom compounding of purchased plastics resins
- 3088 Plastics plumbing fixtures
- 3089 Plastics products, n.e.c.*

31 Leather and Leather Products

- 3111 Leather tanning and finishing
- 3131 Boot and shoe cut stock and findings
- 3142 House slippers
- 3143 Men's footwear, except athletic
- 3144 Women's footwear, except athletic
- 3149 Footwear, except rubber, n.e.c.*
- 3151 Leather gloves and mittens
- 3161 Luggage
- 3171 Women's handbags and purses
- 3172 Personal leather goods, except women's handbags and purses
- 3199 Leather goods, n.e.c.*

32 Stone, Clay, Glass and Concrete Products

- 3211 Flat glass
- 3221 Glass containers
- 3229 Pressed and blown glass and glassware, n.e.c.*
- 3231 Glass products, made of purchased glass
- 3241 Cement, hydraulic
- 3251 Brick and structural clay tile
- 3253 Ceramic wall and floor tile
- 3255 Clay refractories
- 3259 Structural clay products, n.e.c.*
- 3261 Vitreous china plumbing fixtures and china and earthenware fittings and bathroom accessories
- 3262 Vitreous china table and kitchen articles
- 3263 Fine earthenware (whiteware) table and kitchen articles
- 3264 Porcelain electrical supplies
- 3269 Pottery products, n.e.c.*
- 3271 Concrete block and brick
- 3272 Concrete products, except block and brick
- 3273 Ready mixed concrete
- 3274 Lime
- 3275 Gypsum products
- 3281 Cut stone and stone products
- 3291 Abrasive products
- 3292 Asbestos products
- 3295 Minerals and earths, ground or otherwise treated
- 3296 Mineral wool
- 3297 Nonclay refractories

- 3299 Nonmetallic mineral products, n.e.c.*

33 Primary Metal Industries

- 3312 Steel works, blast furnaces (including coke ovens), and rolling mills
- 3313 Electrometallurgical products, except steel
- 3315 Steel wiredrawing and steel nails and spikes
- 3316 Cold-rolled steel sheet, strip, and bars
- 3317 Steel pipe and tubes
- 3321 Gray and ductile iron foundries
- 3322 Malleable iron foundries
- 3324 Steel investment foundries
- 3325 Steel foundries, n.e.c.*
- 3331 Primary smelting and refining of copper
- 3334 Primary production of aluminum
- 3339 Primary smelting and refining of nonferrous metals, except copper and aluminum
- 3341 Secondary smelting and refining of nonferrous metals
- 3351 Rolling, drawing, and extruding of copper
- 3353 Aluminum sheet, plate, and foil
- 3354 Aluminum extruded products
- 3355 Aluminum rolling and drawing, n.e.c.*
- 3356 Rolling, drawing, and extruding of nonferrous metals, except copper and aluminum
- 3357 Drawing and insulating of nonferrous wire
- 3363 Aluminum die-castings
- 3364 Nonferrous die-castings, except aluminum
- 3365 Aluminum foundries
- 3366 Copper foundries
- 3369 Nonferrous foundries, except aluminum and copper
- 3398 Metal heat treating
- 3399 Primary metal products, n.e.c.*

34 Fabricated Metal Products, except Machinery and Transportation Equipment

- 3411 Metal cans
- 3412 Metal shipping barrels, drums, kegs, and pails
- 3421 Cutlery
- 3423 Hand and edge tools, except machine tools and handsaws
- 3425 Handsaws and saw blades
- 3429 Hardware, n.e.c.*
- 3431 Enameled iron and metal sanitary ware
- 3432 Plumbing fixture fittings and trim
- 3433 Heating equipment, except electric and warm air furnaces
- 3441 Fabricated structural metal
- 3442 Metal doors, sash, frames, molding, and trim

| | | | |
|-----------|--|-----------|---|
| 3443 | Fabricated plate work (boiler shops) | 3544 | Special dies and tools, die sets, jigs and fixtures, and industrial molds |
| 3444 | Sheet metal work | 3545 | Cutting tools, machine tool accessories, and machinists' measuring devices |
| 3446 | Architectural and ornamental metal work | 3546 | Power driven handtools |
| 3448 | Prefabricated metal buildings and components | 3547 | Rolling mill machinery and equipment |
| 3449 | Miscellaneous structural metal work | 3548 | Electric and gas welding and soldering equipment |
| 3451 | Screw machine products | 3549 | Metalworking machinery, n.e.c.* |
| 3452 | Bolts, nuts, screws, rivets, and washers | 3552 | Textile machinery |
| 3462 | Iron and steel forgings | 3553 | Woodworking machinery |
| 3463 | Nonferrous forgings | 3554 | Paper industries machinery |
| 3465 | Automotive stampings | 3555 | Printing trades machinery and equipment |
| 3466 | Crowns and closures | 3556 | Food products machinery |
| 3469 | Metal stampings, n.e.c.* | 3559 | Special industry machinery, n.e.c.* |
| 3471 | Electroplating, plating, polishing, anodizing, and coloring | 3561 | Pumps and pumping equipment |
| 3479 | Coating, engraving and allied services, n.e.c.* | 3562 | Ball and roller bearings |
| 3482 | Small arms ammunition | 3563 | Air and gas compressors |
| 3483 | Ammunition, except for small arms | 3564 | Industrial and commercial fans and blowers and air purification equipment |
| 3484 | Small arms | 3565 | Packaging equipment |
| 3489 | Ordnance and accessories, n.e.c.* | 3566 | Speed changers, industrial high speed drives, and gears |
| 3491 | Industrial valves | 3567 | Industrial process furnaces and ovens |
| 3492 | Fluid power valves and hose fittings | 3568 | Mechanical power transmission equipment, n.e.c.* |
| 3493 | Steel springs, except wire | 3569 | General industrial machinery and equipment, n.e.c.* |
| 3494 | Valves and pipe fittings, n.e.c.* | 3571 | Electronic computers |
| 3495 | Wire springs | 3572 | Computer storage devices |
| 3496 | Miscellaneous fabricated wire products | 3575 | Computer terminals |
| 3497 | Metal foil and leaf | 3577 | Computer peripheral equipment, n.e.c.* |
| 3498 | Fabricated pipe and pipe fittings | 3578 | Calculating and accounting machines, except electronic computers |
| 3499 | Fabricated metal products, n.e.c.* | 3579 | Office machines, n.e.c.* |
| | | | |
| 35 | Industrial and Commercial Machinery and Computer Equipment | 3581 | Automatic vending machines |
| 3511 | Steam, gas and hydraulic turbines, and turbine generator set units | 3582 | Commercial laundry, dry-cleaning, and pressing machines |
| 3519 | Internal combustion engines, n.e.c.* | 3585 | Air conditioning and warm air heating equipment and commercial and industrial refrigeration equipment |
| 3523 | Farm machinery and equipment | 3586 | Measuring and dispensing pumps |
| 3524 | Lawn and garden tractors and home lawn and garden equipment | 3589 | Service industry machinery, n.e.c.* |
| 3531 | Construction machinery and equipment | 3592 | Carburetors, pistons, piston rings, and valves |
| 3532 | Mining machinery and equipment, except oil and gas field machinery and equipment | 3593 | Fluid power cylinders and actuators |
| 3533 | Oil and gas field machinery and equipment | 3594 | Fluid power pumps and motors |
| 3534 | Elevators and moving stairways | 3596 | Scales and balances, except laboratory |
| 3535 | Conveyors and conveying equipment | 3599 | Industrial and commercial machinery and equipment, n.e.c.* |
| 3536 | Overhead traveling cranes, hoists, and monorail systems | | |
| 3537 | Industrial trucks, tractors, trailers, and stackers | 36 | Electronic and Other Electrical Equipment and Components, Except Computer Equipment |
| 3541 | Machine tools, metal cutting types | 3612 | Power, distribution, and specialty transformers |
| 3542 | Machine tools, metal forming types | 3613 | Switchgear and switchboard apparatus |
| 3543 | Industrial patterns | | |

* "Not elsewhere classified" indicated by "n.e.c."

- 3942 Dolls and stuffed toys
- 3944 Games, toys and children's vehicles; except dolls and bicycles
- 3949 Sporting and athletic goods, n.e.c.*
- 3951 Pens, mechanical pencils, and parts
- 3952 Lead pencils, crayons, and artists' materials
- 3953 Marking devices
- 3955 Carbon paper and inked ribbons
- 3961 Costume jewelry and costume novelties, except precious metal
- 3965 Fasteners, buttons, needles, and pins
- 3991 Brooms and brushes
- 3993 Signs and advertising specialties
- 3995 Burial caskets
- 3996 Linoleum, asphalted-felt-base, and other hard surface floor coverings, n.e.c.*
- 3999 Manufacturing industries, n.e.c.*

49 Electric, Gas, and Sanitary Services (limited to 4911, 4931, 4939 and 4953)

- 4911 Electric Services (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce)
- 4931 Electric and Other Services Combined (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce)
- 4939 Combination utilities, Not Elsewhere Classified (limited to facilities that combust coal and/or oil for the purpose of generating electricity for distribution in commerce)
- 4953 Refuse Systems (limited to facilities regulated under the RCRA Subtitle C, 42 U.S.C. section 6921 *et seq.*)

51 Wholesale Trade—Nondurable Goods (limited to 5169 and 5171)

- 5169 Chemical and Allied Products, Not Elsewhere Classified
- 5171 Petroleum Terminals and Bulk Stations

73 Business Services (limited to 7389)

- 7389 Business Services, Not Elsewhere Classified (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis)

*"Not elsewhere classified" indicated by "n.e.c."

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Table II. EPCRA Section 313 Chemical List For Reporting Year 2002 (including Toxic Chemical Categories)

Individually listed EPCRA Section 313 chemicals with CAS numbers are arranged alphabetically starting on page II-3. Following the alphabetical list, the EPCRA Section 313 chemicals are arranged in CAS number order. Covered chemical categories follow.

Certain EPCRA Section 313 chemicals listed in Table II have parenthetical “qualifiers.” These qualifiers indicate that these EPCRA Section 313 chemicals are subject to the section 313 reporting requirements if manufactured, processed, or otherwise used in a specific form or when a certain activity is performed. The following chemicals are reportable only if they are manufactured, processed, or otherwise used in the specific form(s) listed below:

| <u>Chemical</u> | <u>CAS Number</u> | <u>Qualifier</u> |
|---|-------------------|--|
| Aluminum (fume or dust) | 7429-90-5 | Only if it is a fume or dust form. |
| Aluminum oxide (fibrous forms) | 1344-28-1 | Only if it is a fibrous form. |
| Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing) | 7664-41-7 | Only 10% of aqueous forms. 100% of anhydrous forms. |
| Asbestos (friable) | 1332-21-4 | Only if it is a friable form. |
| Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | 7647-01-0 | Only if it is an aerosol form as defined. |
| Phosphorus (yellow or white) | 7723-14-0 | Only if it is a yellow or white form. |
| Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | 7664-93-9 | Only if it is an aerosol form as defined. |
| Vanadium (except when contained in an alloy) | 7440-62-2 | Except if it is contained in an alloy. |
| Zinc (fume or dust) | 7440-66-6 | Only if it is in a fume or dust form. |

The qualifier for the following three chemicals is based on the chemical activity rather than the form of the chemical. These chemicals are subject to EPCRA section 313 reporting requirements only when the indicated activity is performed.

| <u>Chemical/ Chemical Category</u> | <u>CAS Number</u> | <u>Qualifier</u> |
|--|-------------------|--|
| Dioxin and dioxin-like compounds (manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacture of that chemical.) | NA | Only if they are manufactured at the facility; or are processed or otherwise used when present as contaminants in a chemical but only if they were created during the manufacture of that chemical. |
| Isopropyl alcohol only (only persons who manufacture by the strong acid process are subject, no supplier notification) | 67-63-0 | Only if it is being manufactured by the strong acid process. Facilities that process or otherwise use isopropyl alcohol are not covered. |
| Saccharin only persons who manufacture are subject, no supplier notification) | 81-07-2 | Only if it is being manufactured. |

There are no supplier notification requirements for isopropyl alcohol and saccharin since the processors and users of these chemicals are not required to report. Manufacturers of these chemicals do not need to notify their customers that these are reportable EPCRA section 313 chemicals.

Table II

Note: Chemicals may be added to or deleted from the list. The Emergency Planning and Community Right-to-Know Call Center, 800 424-9346, or 703 412-9810, will provide up-to-date information on the status of these changes. See section B.3.c of the instructions for more information on the *de minimis* values listed below. There are no *de minimis* levels for PBT chemicals since the *de minimis* exemption is not available for these chemicals (an asterisk appears where a *de minimis* limit would otherwise appear in Table II). However, for purposes of the supplier notification requirement only, such limits are provided in Appendix D.

Chemical Qualifiers

This table contains the list of individual EPCRA Section 313 chemicals and categories of chemicals subject to 2002 calendar year reporting. Some of the EPCRA Section 313 chemicals listed have parenthetical qualifiers listed next to them. An EPCRA Section 313 chemical that is listed without a qualifier is subject to reporting in all forms in which it is manufactured, processed, and otherwise used.

Fume or dust. Two of the metals on the list (aluminum and zinc) contain the qualifier “fume or dust.” Fume or dust refers to dry forms of these metals but does not refer to “wet” forms such as solutions or slurries. As explained in Section B.3.a of these instructions, the term manufacture includes the generation of an EPCRA Section 313 chemical as a byproduct or impurity. In such cases, a facility should determine if, for example, it generated more than 25,000 pounds of aluminum fume or dust in the reporting year as a result of its activities. If so, the facility must report that it manufactures “aluminum (fume or dust).” Similarly, there may be certain technologies in which one of these metals is processed in the form of a fume or dust to make other EPCRA Section 313 chemicals or other products for distribution in commerce. In reporting releases, the facility would only report releases of the fume or dust.

EPA considers dusts to consist of solid particles generated by any mechanical processing of materials including crushing, grinding, rapid impact, handling, detonation, and decrepitation of organic and inorganic materials such as rock, ore, and metal. Dusts do not tend to flocculate, except under electrostatic forces.

EPA considers a fume to be an airborne dispersion consisting of small solid particles created by condensation from a gaseous state, in distinction to a gas or vapor. Fumes arise from the heating of solids such as lead. The condensation is often accompanied by a chemical reaction, such as oxidation. Fumes flocculate and sometimes coalesce.

Manufacturing qualifiers. Two of the entries in the EPCRA Section 313 chemical list contain a qualifier relating to manufacture. For isopropyl alcohol, the qualifier is “only persons

who manufacture by the strong acid process are subject.” For saccharin, the qualifier is “only persons who manufacture are subject, no supplier notification.” For isopropyl alcohol, the qualifier means that only facilities manufacturing isopropyl alcohol by the strong acid process are required to report. In the case of saccharin, only manufacturers of the EPCRA Section 313 chemical are subject to the reporting requirements. A facility that processes or otherwise uses either EPCRA Section 313 chemical would not be required to report for those EPCRA Section 313 chemicals. In both cases, supplier notification does not apply because only manufacturers, not users, of the EPCRA Section 313 chemical must report.

Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing). The qualifier for ammonia means that anhydrous forms of ammonia are 100% reportable and aqueous forms are limited to 10% of total aqueous ammonia. Therefore when determining threshold and releases and other waste management quantities all anhydrous ammonia is included but only 10% of total aqueous ammonia is included. Any evaporation of ammonia from aqueous ammonia solutions is considered anhydrous ammonia and should be included in threshold determinations and release and other waste management calculations.

Sulfuric acid and Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size). The qualifier for sulfuric acid and hydrochloric acid means that the only forms of these chemicals that are reportable are airborne forms. Aqueous solutions are not covered by this listing but any aerosols generated from aqueous solutions are covered.

Nitrate compounds (water dissociable; reportable only when in aqueous solution). The qualifier for the nitrate compounds category limits the reporting to nitrate compounds that dissociate in water, generating nitrate ion. For the purposes of threshold determinations the entire weight of the nitrate compound must be included in all calculations. For the purposes of reporting releases and other waste management quantities only the weight of the nitrate ion should be included in the calculations of these

quantities.

Phosphorus (yellow or white). The listing for phosphorus is qualified by the term “yellow or white.” This means that only manufacturing, processing, or otherwise use of phosphorus in the yellow or white chemical form triggers reporting. Conversely, manufacturing, processing, or otherwise use of “black” or “red” phosphorus does not trigger reporting. Supplier notification also applies only to distribution of yellow or white phosphorus.

Asbestos (friable). The listing for asbestos is qualified by the term “friable,” referring to the physical characteristic of being able to be crumbled, pulverized, or reducible to a powder with hand pressure. Only manufacturing, processing, or otherwise use of asbestos in the friable form triggers reporting. Supplier notification applies only to distribution of mixtures or other trade name products containing friable asbestos.

Aluminum Oxide (fibrous forms). The listing for aluminum oxide is qualified by the term “fibrous forms.” Fibrous refers to a man-made form of aluminum oxide that is processed to produce strands or filaments which can be cut to various lengths depending on the application. Only manufacturing, processing, or otherwise use of aluminum oxide in the fibrous form triggers reporting. Supplier notification applies only to distribution of mixtures or other trade name products containing fibrous forms of aluminum oxide.

Notes for Sections A and B of following list of TRI chemicals:

“Color Index” indicated by “C.I.”

* There are no *de minimis* levels for PBT chemicals, except for supplier notification purposes (see Appendix D)

a. Individually-Listed Toxic Chemicals Arranged Alphabetically

| CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|---|-------------------------|
| 71751-41-2 | Abamectin [Avermectin B1] | 1.0 |
| 30560-19-1 | Acephate (Acetylphosphoramidothioic acid O,S-dimethyl ester) | 1.0 |
| 75-07-0 | Acetaldehyde | 0.1 |
| 60-35-5 | Acetamide | 0.1 |
| 75-05-8 | Acetonitrile | 1.0 |
| 98-86-2 | Acetophenone | 1.0 |
| 53-96-3 | 2-Acetylaminofluorene | 0.1 |
| 62476-59-9 | Acifluorfen, sodium salt [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2-nitrobenzoic acid, sodium salt] | 1.0 |
| 107-02-8 | Acrolein | 1.0 |
| 79-06-1 | Acrylamide | 0.1 |
| 79-10-7 | Acrylic acid | 1.0 |
| 107-13-1 | Acrylonitrile | 0.1 |
| 15972-60-8 | Alachlor | 1.0 |
| 116-06-3 | Aldicarb | 1.0 |
| 309-00-2 | Aldrin [1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-] | * |
| 28057-48-9 | d-trans-Allethrin [d-trans-Chrysanthemic acid of d-allethrine] | 1.0 |
| 107-18-6 | Allyl alcohol | 1.0 |
| 107-11-9 | Allylamine | 1.0 |
| 107-05-1 | Allyl chloride | 1.0 |
| 7429-90-5 | Aluminum (fume or dust) | 1.0 |
| 20859-73-8 | Aluminum phosphide | 1.0 |
| 1344-28-1 | Aluminum oxide (fibrous forms) | 1.0 |
| 834-12-8 | Ametryn (N-Ethyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5,-triazine-2,4-diamine) | 1.0 |
| 117-79-3 | 2-Aminoanthraquinone | 0.1 |
| 60-09-3 | 4-Aminoazobenzene | 0.1 |
| 92-67-1 | 4-Aminobiphenyl | 0.1 |
| 82-28-0 | 1-Amino-2-methylantraquinone | 0.1 |

Table II

| | | | <i>De Minimis</i> | | |
|------------|---|-------|-------------------|---|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 33089-61-1 | Amitraz | 1.0 | 314-40-9 | Bromacil | 1.0 |
| 61-82-5 | Amitrole | 0.1 | | (5-Bromo-6-methyl-3-(1-methylpropyl)-2,4(1H,3H)-pyrimidinedione) | |
| 7664-41-7 | Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing) | 1.0 | 53404-19-6 | Bromacil, lithium salt | 1.0 |
| | | | | [2,4(1H,3H)-Pyrimidinedione,5-bromo-6-methyl-3-(1-methylpropyl), lithium salt] | |
| 101-05-3 | Anilazine [4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine] | 1.0 | 7726-95-6 | Bromine | 1.0 |
| 62-53-3 | Aniline | 1.0 | 35691-65-7 | 1-Bromo-1-(bromomethyl)-1,3-propanedicarbonitrile | 1.0 |
| 90-04-0 | o-Anisidine | 0.1 | 353-59-3 | Bromochlorodifluoromethane (Halon 1211) | 1.0 |
| 104-94-9 | p-Anisidine | 1.0 | 75-25-2 | Bromoform (Tribromomethane) | 1.0 |
| 134-29-2 | o-Anisidine hydrochloride | 0.1 | 74-83-9 | Bromomethane (Methyl bromide) | 1.0 |
| 120-12-7 | Anthracene | 1.0 | 75-63-8 | Bromotrifluoromethane (Halon 1301) | 1.0 |
| 7440-36-0 | Antimony | 1.0 | 1689-84-5 | Bromoxynil (3,5-Dibromo-4-hydroxybenzonitrile) | 1.0 |
| 7440-38-2 | Arsenic | 0.1 | 1689-99-2 | Bromoxynil octanoate (Octanoic acid, 2,6-dibromo-4-cyanophenylester) | 1.0 |
| 1332-21-4 | Asbestos (friable) | 0.1 | | | |
| 1912-24-9 | Atrazine (6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine) | 1.0 | 357-57-3 | Brucine | 1.0 |
| 7440-39-3 | Barium | 1.0 | 106-99-0 | 1,3-Butadiene | 0.1 |
| 22781-23-3 | Bendiocarb [2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate] | 1.0 | 141-32-2 | Butyl acrylate | 1.0 |
| | | | 71-36-3 | n-Butyl alcohol | 1.0 |
| 1861-40-1 | Benfluralin (N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl)benzenamine) | 1.0 | 78-92-2 | sec-Butyl alcohol | 1.0 |
| | | | 75-65-0 | tert-Butyl alcohol | 1.0 |
| 17804-35-2 | Benomyl | 1.0 | 106-88-7 | 1,2-Butylene oxide | 0.1 |
| 98-87-3 | Benzal chloride | 1.0 | 123-72-8 | Butyraldehyde | 1.0 |
| 55-21-0 | Benzamide | 1.0 | 7440-43-9 | Cadmium | 0.1 |
| 71-43-2 | Benzene | 0.1 | 156-62-7 | Calcium cyanamide | 1.0 |
| 92-87-5 | Benzidine | 0.1 | 133-06-2 | Captan [1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a-tetrahydro-2-[(trichloromethyl)thio]-] | 1.0 |
| 98-07-7 | Benzoic trichloride (Benzotrichloride) | 0.1 | 63-25-2 | Carbaryl [1-Naphthalenol, methylcarbamate] | 1.0 |
| 191-24-2 | Benzo(g,h,i)perylene | * | 1563-66-2 | Carbofuran | 1.0 |
| 98-88-4 | Benzoyl chloride | 1.0 | 75-15-0 | Carbon disulfide | 1.0 |
| 94-36-0 | Benzoyl peroxide | 1.0 | 56-23-5 | Carbon tetrachloride | 0.1 |
| 100-44-7 | Benzyl chloride | 1.0 | 463-58-1 | Carbonyl sulfide | 1.0 |
| 7440-41-7 | Beryllium | 0.1 | 5234-68-4 | Carboxin (5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide) | 1.0 |
| 82657-04-3 | Bifenthrin | 1.0 | | | |
| 92-52-4 | Biphenyl | 1.0 | 120-80-9 | Catechol | 0.1 |
| 111-91-1 | Bis(2-chloroethoxy) methane | 1.0 | 2439-01-2 | Chinomethionat [6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one] | 1.0 |
| 111-44-4 | Bis(2-chloroethyl) ether | 1.0 | | | |
| 542-88-1 | Bis(chloromethyl) ether | 0.1 | 133-90-4 | Chloramben [Benzoic acid, 3-amino-2,5-dichloro-] | 1.0 |
| 108-60-1 | Bis(2-chloro-1-methylethyl)ether | 1.0 | | | |
| 56-35-9 | Bis(tributyltin) oxide | 1.0 | 57-74-9 | Chlordane [4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-] | * |
| 10294-34-5 | Boron trichloride | 1.0 | | | |
| 7637-07-2 | Boron trifluoride | 1.0 | | | |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|---|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 115-28-6 | Chlorendic acid | 0.1 | 7440-47-3 | Chromium | 1.0 |
| 90982-32-4 | Chlorimuron ethyl [Ethyl-2-[[[(4-chloro-6-methoxyprimidin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate] | 1.0 | 4680-78-8 | C.I. Acid Green 3 | 1.0 |
| 7782-50-5 | Chlorine | 1.0 | 6459-94-5 | C.I. Acid Red 114 | 0.1 |
| 10049-04-4 | Chlorine dioxide | 1.0 | 569-64-2 | C.I. Basic Green 4 | 1.0 |
| 79-11-8 | Chloroacetic acid | 1.0 | 989-38-8 | C.I. Basic Red 1 | 1.0 |
| 532-27-4 | 2-Chloroacetophenone | 1.0 | 1937-37-7 | C.I. Direct Black 38 | 0.1 |
| 4080-31-3 | 1-(3-Chloroallyl)-3,5,7-triazol-1-azoniaadamantane chloride | 1.0 | 2602-46-2 | C.I. Direct Blue 6 | 0.1 |
| 106-47-8 | p-Chloroaniline | 0.1 | 28407-37-6 | C.I. Direct Blue 218 | 1.0 |
| 108-90-7 | Chlorobenzene | 1.0 | 16071-86-6 | C.I. Direct Brown 95 | 0.1 |
| 510-15-6 | Chlorobenzoate | 1.0 | 2832-40-8 | C.I. Disperse Yellow 3 | 1.0 |
| 75-68-3 | [Benzenoacetic acid, 4-chloro-.alpha.- (4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester] | 1.0 | 3761-53-3 | C.I. Food Red 5 | 0.1 |
| 75-68-3 | 1-Chloro-1,1-difluoroethane (HCFC-142b) | 1.0 | 81-88-9 | C.I. Food Red 15 | 1.0 |
| 75-45-6 | Chlorodifluoromethane (HCFC-22) | 1.0 | 3118-97-6 | C.I. Solvent Orange 7 | 1.0 |
| 75-00-3 | Chloroethane (Ethyl chloride) | 1.0 | 97-56-3 | C.I. Solvent Yellow 3 | 0.1 |
| 67-66-3 | Chloroform | 0.1 | 842-07-9 | C.I. Solvent Yellow 14 | 1.0 |
| 74-87-3 | Chloromethane (Methyl chloride) | 1.0 | 492-80-8 | C.I. Solvent Yellow 34 (Auramine) | 0.1 |
| 107-30-2 | Chloromethyl methyl ether | 0.1 | 128-66-5 | C.I. Vat Yellow 4 | 1.0 |
| 563-47-3 | 3-Chloro-2-methyl-1-propene | 0.1 | 7440-48-4 | Cobalt | 0.1 |
| 104-12-1 | p-Chlorophenyl isocyanate | 1.0 | 7440-50-8 | Copper | 1.0 |
| 76-06-2 | Chloropicrin | 1.0 | 8001-58-9 | Creosote | 0.1 |
| 126-99-8 | Chloroprene | 0.1 | 120-71-8 | p-Cresidine | 0.1 |
| 542-76-7 | 3-Chloropropionitrile | 1.0 | 108-39-4 | m-Cresol | 1.0 |
| 63938-10-3 | Chlorotetrafluoroethane | 1.0 | 95-48-7 | o-Cresol | 1.0 |
| 354-25-6 | 1-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124a) | 1.0 | 106-44-5 | p-Cresol | 1.0 |
| 2837-89-0 | 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124) | 1.0 | 1319-77-3 | Cresol (mixed isomers) | 1.0 |
| 1897-45-6 | Chlorothalonil [1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-] | 0.1 | 4170-30-3 | Crotonaldehyde | 1.0 |
| 95-69-2 | p-Chloro-o-toluidine | 0.1 | 98-82-8 | Cumene | 1.0 |
| 75-88-7 | 2-Chloro-1,1,1-trifluoroethane (HCFC-133a) | 1.0 | 80-15-9 | Cumene hydroperoxide | 1.0 |
| 75-72-9 | Chlorotrifluoromethane (CFC-13) | 1.0 | 135-20-6 | Cupferron [Benzeneamine, N-hydroxy-N-nitroso, ammonium salt] | 0.1 |
| 460-35-5 | 3-Chloro-1,1,1-trifluoropropane (HCFC-253fb) | 1.0 | 21725-46-2 | Cyanazine | 1.0 |
| 5598-13-0 | Chlorpyrifos methyl [O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate] | 1.0 | 1134-23-2 | Cycloate | 1.0 |
| 64902-72-3 | Chlorsulfuron [2-Chloro-N-[[[4-methoxy-6-methyl-1,3,5-triazin-2-yl]amino]carbonyl]benzenesulfonamide] | 1.0 | 110-82-7 | Cyclohexane | 1.0 |
| | | | 108-93-0 | Cyclohexanol | 1.0 |
| | | | 68359-37-5 | Cyfluthrin [3-(2,2-Dichloroethenyl)-2,2-dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl) methyl ester] | 1.0 |
| | | | 68085-85-8 | Cyhalothrin [3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane-carboxylic acid cyano(3-phenoxyphenyl)methyl ester] | 1.0 |
| | | | 94-75-7 | 2,4-D [Acetic acid, (2,4-dichlorophenoxy)-] | 0.1 |
| | | | 533-74-4 | Dazomet (Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione) | 1.0 |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|--|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 53404-60-7 | Dazomet, sodium salt [Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione, ion(1-), sodium] | 1.0 | 1717-00-6 | 1,1-Dichloro-1-fluoroethane (HCFC-141b) | 1.0 |
| 94-82-6 | 2,4-DB | 1.0 | 75-43-4 | Dichlorofluoromethane (HCFC-21) | 1.0 |
| 1929-73-3 | 2,4-D butoxyethyl ester | 0.1 | 75-09-2 | Dichloromethane (Methylene chloride) | 0.1 |
| 94-80-4 | 2,4-D butyl ester | 0.1 | 127564-92-5 | Dichloropentafluoropropane | 1.0 |
| 2971-38-2 | 2,4-D chlorocrotyl ester | 0.1 | 13474-88-9 | 1,1-Dichloro-1,2,2,3,3-pentafluoropropane (HCFC-225cc) | 1.0 |
| 1163-19-5 | Decabromodiphenyl oxide | 1.0 | 111512-56-2 | 1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb) | 1.0 |
| 13684-56-5 | Desmedipham | 1.0 | 422-44-6 | 1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb) | 1.0 |
| 1928-43-4 | 2,4-D 2-ethylhexyl ester | 0.1 | 431-86-7 | 1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da) | 1.0 |
| 53404-37-8 | 2,4-D 2-ethyl-4-methylpentyl ester | 0.1 | 507-55-1 | 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb) | 1.0 |
| 2303-16-4 | Diallate [Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester] | 1.0 | 136013-79-1 | 1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea) | 1.0 |
| 615-05-4 | 2,4-Diaminoanisole | 0.1 | 128903-21-9 | 2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa) | 1.0 |
| 39156-41-7 | 2,4-Diaminoanisole sulfate | 0.1 | 422-48-0 | 2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba) | 1.0 |
| 101-80-4 | 4,4'-Diaminodiphenyl ether | 0.1 | 422-56-0 | 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca) | 1.0 |
| 95-80-7 | 2,4-Diaminotoluene | 0.1 | 97-23-4 | Dichlorophene [2,2'-Methylenebis(4-chlorophenol)] | 1.0 |
| 25376-45-8 | Diaminotoluene (mixed isomers) | 0.1 | 120-83-2 | 2,4-Dichlorophenol | 1.0 |
| 333-41-5 | Diazinon | 1.0 | 78-87-5 | 1,2-Dichloropropane | 1.0 |
| 334-88-3 | Diazomethane | 1.0 | 10061-02-6 | trans-1,3-Dichloropropene | 0.1 |
| 132-64-9 | Dibenzofuran | 1.0 | 78-88-6 | 2,3-Dichloropropene | 1.0 |
| 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | 0.1 | 542-75-6 | 1,3-Dichloropropylene | 0.1 |
| 106-93-4 | 1,2-Dibromoethane (Ethylene dibromide) | 0.1 | 76-14-2 | Dichlorotetrafluoroethane (CFC-114) | 1.0 |
| 124-73-2 | Dibromotetrafluoroethane (Halon 2402) | 1.0 | 34077-87-7 | Dichlorotrifluoroethane | 1.0 |
| 84-74-2 | Dibutyl phthalate | 1.0 | 90454-18-5 | Dichloro-1,1,2-trifluoroethane | 1.0 |
| 1918-00-9 | Dicamba (3,6-Dichloro-2-methoxybenzoic acid) | 1.0 | 812-04-4 | 1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b) | 1.0 |
| 99-30-9 | Dichloran [2,6-Dichloro-4-nitroaniline] | 1.0 | 354-23-4 | 1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a) | 1.0 |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | 306-83-2 | 2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123) | 1.0 |
| 541-73-1 | 1,3-Dichlorobenzene | 1.0 | 62-73-7 | Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester] | 0.1 |
| 106-46-7 | 1,4-Dichlorobenzene | 0.1 | 51338-27-3 | Diclofop methyl [2-[4-(2,4-Dichlorophenoxy)phenoxy] propanoic acid, methyl ester] | 1.0 |
| 25321-22-6 | Dichlorobenzene (mixed isomers) | 0.1 | 115-32-2 | Dicofol [Benzenemethanol, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-(trichloromethyl)-] | 1.0 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.1 | 77-73-6 | Dicyclopentadiene | 1.0 |
| 612-83-9 | 3,3'-Dichlorobenzidine dihydrochloride | 0.1 | | | |
| 64969-34-2 | 3,3'-Dichlorobenzidine sulfate | 0.1 | | | |
| 75-27-4 | Dichlorobromomethane | 0.1 | | | |
| 764-41-0 | 1,4-Dichloro-2-butene | 1.0 | | | |
| 110-57-6 | trans-1,4-Dichloro-2-butene | 1.0 | | | |
| 1649-08-7 | 1,2-Dichloro-1,1-difluoroethane (HCFC-132b) | 1.0 | | | |
| 75-71-8 | Dichlorodifluoromethane (CFC-12) | 1.0 | | | |
| 107-06-2 | 1,2-Dichloroethane (Ethylene dichloride) | 0.1 | | | |
| 540-59-0 | 1,2-Dichloroethylene | 1.0 | | | |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|--|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 1464-53-5 | Diepoxybutane | 0.1 | 122-66-7 | 1,2-Diphenylhydrazine | 0.1 |
| 111-42-2 | Diethanolamine | 1.0 | | (Hydrazobenzene) | |
| 38727-55-8 | Diethyl ethyl | 1.0 | 2164-07-0 | Dipotassium endothal | 1.0 |
| 117-81-7 | Di(2-ethylhexyl) phthalate (DEHP) | 0.1 | | [7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid, dipotassium salt] | |
| 64-67-5 | Diethyl sulfate | 0.1 | 136-45-8 | Dipropyl isocinchomerate | 1.0 |
| 35367-38-5 | Diflubenzuron | 1.0 | 138-93-2 | Disodium | 1.0 |
| 101-90-6 | Diglycidyl resorcinol ether | 0.1 | | cyanodithioimidocarbonate | |
| 94-58-6 | Dihydrosafrole | 0.1 | 94-11-1 | 2,4-D isopropyl ester | 0.1 |
| 55290-64-7 | Dimethipin | 1.0 | 541-53-7 | 2,4-Dithiobiuret | 1.0 |
| | [2,3-Dihydro-5,6-dimethyl-1,4-dithiin | | 330-54-1 | Diuron | 1.0 |
| | 1,1,4,4-tetraoxide] | | 2439-10-3 | Dodine [Dodecylguanidine | 1.0 |
| 60-51-5 | Dimethoate | 1.0 | | monoacetate] | |
| 119-90-4 | 3,3'-Dimethoxybenzidine | 0.1 | 120-36-5 | 2,4-DP | 0.1 |
| 20325-40-0 | 3,3'-Dimethoxybenzidine | 0.1 | 1320-18-9 | 2,4-D propylene glycol | 0.1 |
| | dihydrochloride (o-Dianisidine | | | butyl ether ester | |
| | dihydrochloride) | | 2702-72-9 | 2,4-D sodium salt | 0.1 |
| 111984-09-9 | 3,3'-Dimethoxybenzidine | 0.1 | 106-89-8 | Epichlorohydrin | 0.1 |
| | hydrochloride (o-Dianisidine hydrochloride) | | 13194-48-4 | Ethoprop | 1.0 |
| 124-40-3 | Dimethylamine | 1.0 | | [Phosphorodithioic acid O-ethyl S,S-dipropyl | |
| 2300-66-5 | Dimethylamine dicamba | 1.0 | | ester] | |
| 60-11-7 | 4-Dimethylaminoazobenzene | 0.1 | 110-80-5 | 2-Ethoxyethanol | 1.0 |
| 121-69-7 | N,N-Dimethylaniline | 1.0 | 140-88-5 | Ethyl acrylate | 0.1 |
| 119-93-7 | 3,3'-Dimethylbenzidine (o-Tolidine) | 0.1 | 100-41-4 | Ethylbenzene | 0.1 |
| 612-82-8 | 3,3'-Dimethylbenzidine | 0.1 | 541-41-3 | Ethyl chloroformate | 1.0 |
| | dihydrochloride (o-Tolidine dihydrochloride) | | 759-94-4 | Ethyl dipropylthiocarbamate | 1.0 |
| 41766-75-0 | 3,3'-Dimethylbenzidine | 0.1 | | (EPTC) | |
| | dihydrofluoride (o-Tolidine dihydrofluoride) | | 74-85-1 | Ethylene | 1.0 |
| 79-44-7 | Dimethylcarbanyl chloride | 0.1 | 107-21-1 | Ethylene glycol | 1.0 |
| 2524-03-0 | Dimethyl | 1.0 | 151-56-4 | Ethyleneimine (Aziridine) | 0.1 |
| | chlorothiophosphate | | 75-21-8 | Ethylene oxide | 0.1 |
| 68-12-2 | N,N-Dimethylformamide | 1.0 | 96-45-7 | Ethylene thiourea | 0.1 |
| 57-14-7 | 1,1-Dimethyl hydrazine | 0.1 | 75-34-3 | Ethylidene dichloride | 1.0 |
| 105-67-9 | 2,4-Dimethylphenol | 1.0 | 52-85-7 | Famphur | 1.0 |
| 131-11-3 | Dimethyl phthalate | 1.0 | 60168-88-9 | Fenarimol | 1.0 |
| 77-78-1 | Dimethyl sulfate | 0.1 | | [.alpha.-(2-Chlorophenyl)-.alpha.-(4- | |
| 99-65-0 | m-Dinitrobenzene | 1.0 | | chlorophenyl)-5-pyrimidinemethanol] | |
| 528-29-0 | o-Dinitrobenzene | 1.0 | 13356-08-6 | Fenbutatin oxide | 1.0 |
| 100-25-4 | p-Dinitrobenzene | 1.0 | | (Hexakis(2-methyl-2-phenylpropyl) | |
| 88-85-7 | Dinitrobutyl phenol (Dinoseb) | 1.0 | | distannoxane) | |
| 534-52-1 | 4,6-Dinitro-o-cresol | 1.0 | 66441-23-4 | Fenoxaprop ethyl | 1.0 |
| 51-28-5 | 2,4-Dinitrophenol | 1.0 | | [2-(4-((6-Chloro-2- | |
| 121-14-2 | 2,4-Dinitrotoluene | 0.1 | | benzoxazolyl)oxy)phenoxy)propanoic | |
| 606-20-2 | 2,6-Dinitrotoluene | 0.1 | | acid, ethyl ester] | |
| 25321-14-6 | Dinitrotoluene (mixed isomers) | 1.0 | 72490-01-8 | Fenoxycarb | 1.0 |
| 39300-45-3 | Dinocap | 1.0 | | [[2-(4-Phenoxyphenoxy)ethyl]carbamic acid | |
| 123-91-1 | 1,4-Dioxane | 0.1 | | ethyl ester] | |
| 957-51-7 | Diphenamid | 1.0 | 39515-41-8 | Fenpropathrin | 1.0 |
| 122-39-4 | Diphenylamine | 1.0 | | [2,2,3,3-Tetramethylcyclopropane carboxylic | |
| | | | | acid cyano(3-phenoxyphenyl)methyl ester] | |

Table II

| | | | <i>De Minimis</i> | | |
|------------|---|-------|-------------------|---|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 55-38-9 | Fenthion [O,O-Dimethyl O-[3-methyl-4-(methylthio)phenyl] ester, phosphorothioic acid] | 1.0 | 7647-01-0 | Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | 1.0 |
| 51630-58-1 | Fenvalerate [4-Chloro-alpha-(1-methylethyl) benzeneacetic acid cyano (3-phenoxyphenyl) methyl ester] | 1.0 | 74-90-8 | Hydrogen cyanide | 1.0 |
| 14484-64-1 | Ferbam [Tris(dimethylcarbomodithioato- S,S')iron] | 1.0 | 7664-39-3 | Hydrogen fluoride | 1.0 |
| 69806-50-4 | Fluazifop butyl [2-[4-[[5-(Trifluoromethyl)-2-pyridinyl]oxy]phenoxy]propanoic acid, butyl ester] | 1.0 | 123-31-9 | Hydroquinone | 1.0 |
| 2164-17-2 | Fluometuron [Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-] | 1.0 | 35554-44-0 | Imazalil [1-[2-(2,4-Dichlorophenyl)-2-(2-propenyloxy)ethyl]-1H-imidazole] | 1.0 |
| 7782-41-4 | Fluorine | 1.0 | 55406-53-6 | 3-Iodo-2-propynyl butylcarbamate | 1.0 |
| 51-21-8 | Fluorouracil (5-Fluorouracil) | 1.0 | 13463-40-6 | Iron pentacarbonyl | 1.0 |
| 69409-94-5 | Fluvalinate [N-[2-Chloro-4-(trifluoromethyl)phenyl]-DL-valine(+)-cyano(3-phenoxyphenyl)methyl ester] | 1.0 | 78-84-2 | Isobutyraldehyde | 1.0 |
| 133-07-3 | Folpet | 1.0 | 465-73-6 | Isodrin | * |
| 72178-02-0 | Fomesafen [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N-methylsulfonyl-2-nitrobenzamide] | 1.0 | 25311-71-1 | Isofenphos[2-[[Ethoxy][(1-methylethyl)amino]phosphinothioyl]oxy] benzoic acid 1-methylethyl ester] | 1.0 |
| 50-00-0 | Formaldehyde | 0.1 | 67-63-0 | Isopropyl alcohol (only persons who manufacture by the strong acid process are subject, no supplier notification) | 1.0 |
| 64-18-6 | Formic acid | 1.0 | 80-05-7 | 4,4'-Isopropylidenediphenol | 1.0 |
| 76-13-1 | Freon 113 [Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-] | 1.0 | 120-58-1 | Isosafrole | 1.0 |
| 76-44-8 | Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a, 4,7,7a-tetrahydro-4,7-methano-1H-indene] | * | 77501-63-4 | Lactofen [Benzoic acid, 5-[2-Chloro-4-(trifluoromethyl)phenoxy]-2-nitro-, 2-ethoxy-1-methyl-2-oxoethyl ester] | 1.0 |
| 118-74-1 | Hexachlorobenzene | * | 7439-92-1 | Lead (when lead is contained in stainless steel, brass or bronze alloys the <i>de minimis</i> level is 0.1) | * |
| 87-68-3 | Hexachloro-1,3-butadiene | 1.0 | 58-89-9 | Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1.alpha.,2.alpha.,3.beta.,4.alpha.,5.alpha.,6.beta.)-] | 0.1 |
| 319-84-6 | alpha-Hexachlorocyclohexane | 0.1 | 330-55-2 | Linuron | 1.0 |
| 77-47-4 | Hexachlorocyclopentadiene | 1.0 | 554-13-2 | Lithium carbonate | 1.0 |
| 67-72-1 | Hexachloroethane | 0.1 | 121-75-5 | Malathion | 1.0 |
| 1335-87-1 | Hexachloronaphthalene | 1.0 | 108-31-6 | Maleic anhydride | 1.0 |
| 70-30-4 | Hexachlorophene | 1.0 | 109-77-3 | Malononitrile | 1.0 |
| 680-31-9 | Hexamethylphosphoramide | 0.1 | 12427-38-2 | Maneb [Carbamodithioic acid, 1,2-ethanediylbis-, manganese complex] | 1.0 |
| 110-54-3 | n-Hexane | 1.0 | 7439-96-5 | Manganese | 1.0 |
| 51235-04-2 | Hexazinone | 1.0 | 93-65-2 | Mecoprop | 0.1 |
| 67485-29-4 | Hydramethylnon [Tetrahydro-5,5-dimethyl-2(1H)-pyrimidinone[3-[4-(trifluoromethyl)phenyl]-1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2-propenylidene]hydrazone] | 1.0 | 149-30-4 | 2-Mercaptobenzothiazole (MBT) | 1.0 |
| 302-01-2 | Hydrazine | 0.1 | 7439-97-6 | Mercury | * |
| 10034-93-2 | Hydrazine sulfate | 0.1 | 150-50-5 | Merphos | 1.0 |
| | | | 126-98-7 | Methacrylonitrile | 1.0 |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|---|----------------------------|------------|---|----------------------------|
| 137-42-8 | Metham sodium (Sodium methylthiocarbamate) | 1.0 | 505-60-2 | Mustard gas [Ethane, 1,1'-thiobis[2-chloro-]] | 0.1 |
| 67-56-1 | Methanol | 1.0 | 88671-89-0 | Myclobutanil [.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile] | 1.0 |
| 20354-26-1 | Methazole [2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione] | 1.0 | 142-59-6 | Nabam | 1.0 |
| 2032-65-7 | Methiocarb | 1.0 | 300-76-5 | Naled | 1.0 |
| 94-74-6 | Methoxone ((4-Chloro-2-methylphenoxy) acetic acid) (MCPA) | 0.1 | 91-20-3 | Naphthalene | 1.0 |
| 3653-48-3 | Methoxone sodium salt ((4-Chloro-2-methylphenoxy) acetate sodium salt) | 0.1 | 134-32-7 | alpha-Naphthylamine | 0.1 |
| 72-43-5 | Methoxychlor [Benzene, 1,1'-(2,2,2-trichloroethylene)bis[4-methoxy-]] | * | 91-59-8 | beta-Naphthylamine | 0.1 |
| 109-86-4 | 2-Methoxyethanol | 1.0 | 7440-02-0 | Nickel | 0.1 |
| 96-33-3 | Methyl acrylate | 1.0 | 1929-82-4 | Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine) | 1.0 |
| 1634-04-4 | Methyl tert-butyl ether | 1.0 | 7697-37-2 | Nitric acid | 1.0 |
| 79-22-1 | Methyl chlorocarbonate | 1.0 | 139-13-9 | Nitriлотriacetic acid | 0.1 |
| 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) (MBOCA) | 0.1 | 100-01-6 | p-Nitroaniline | 1.0 |
| 101-61-1 | 4,4'-Methylenebis(N,N-dimethyl)benzenamine | 0.1 | 99-59-2 | 5-Nitro-o-anisidine | 1.0 |
| 74-95-3 | Methylene bromide | 1.0 | 98-95-3 | Nitrobenzene | 0.1 |
| 101-77-9 | 4,4'-Methylenedianiline | 0.1 | 92-93-3 | 4-Nitrobiphenyl | 0.1 |
| 78-93-3 | Methyl ethyl ketone | 1.0 | 1836-75-5 | Nitrofen [Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-] | 0.1 |
| 60-34-4 | Methyl hydrazine | 1.0 | 51-75-2 | Nitrogen mustard [2-Chloro-N-(2-chloroethyl)-N-methylethanamine] | 0.1 |
| 74-88-4 | Methyl iodide | 1.0 | 55-63-0 | Nitroglycerin | 1.0 |
| 108-10-1 | Methyl isobutyl ketone | 1.0 | 88-75-5 | 2-Nitrophenol | 1.0 |
| 624-83-9 | Methyl isocyanate | 1.0 | 100-02-7 | 4-Nitrophenol | 1.0 |
| 556-61-6 | Methyl isothiocyanate [Isothiocyanatomethane] | 1.0 | 79-46-9 | 2-Nitropropane | 0.1 |
| 75-86-5 | 2-Methylactonitrile | 1.0 | 924-16-3 | N-Nitrosodi-n-butylamine | 0.1 |
| 80-62-6 | Methyl methacrylate | 1.0 | 55-18-5 | N-Nitrosodiethylamine | 0.1 |
| 924-42-5 | N-Methylolacrylamide | 1.0 | 62-75-9 | N-Nitrosodimethylamine | 0.1 |
| 298-00-0 | Methyl parathion | 1.0 | 86-30-6 | N-Nitrosodiphenylamine | 1.0 |
| 109-06-8 | 2-Methylpyridine | 1.0 | 156-10-5 | p-Nitrosodiphenylamine | 1.0 |
| 872-50-4 | N-Methyl-2-pyrrolidone | 1.0 | 621-64-7 | N-Nitrosodi-n-propylamine | 0.1 |
| 9006-42-2 | Metiram | 1.0 | 759-73-9 | N-Nitroso-N-ethylurea | 0.1 |
| 21087-64-9 | Metribuzin | 1.0 | 684-93-5 | N-Nitroso-N-methylurea | 0.1 |
| 7786-34-7 | Mevinphos | 1.0 | 4549-40-0 | N-Nitrosomethylvinylamine | 0.1 |
| 90-94-8 | Michler's ketone | 0.1 | 59-89-2 | N-Nitrosomorpholine | 0.1 |
| 2212-67-1 | Molinate (1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester) | 1.0 | 16543-55-8 | N-Nitrosornicotine | 0.1 |
| 1313-27-5 | Molybdenum trioxide | 1.0 | 100-75-4 | N-Nitrosopiperidine | 0.1 |
| 76-15-3 | Monochloropentafluoroethane (CFC-115) | 1.0 | 99-55-8 | 5-Nitro-o-toluidine | 1.0 |
| 150-68-5 | Monuron | 1.0 | 27314-13-2 | Norflurazon [4-Chloro-5-(methylamino)-2-[3-(trifluoromethyl)phenyl]-3(2H)-pyridazinone] | 1.0 |
| | | | 2234-13-1 | Octachloronaphthalene | 1.0 |
| | | | 29082-74-4 | Octachlorostyrene | * |
| | | | 19044-88-3 | Oryzalin [4-(Dipropylamino)-3,5-dinitrobenzene sulfonamide] | 1.0 |
| | | | 20816-12-0 | Osmium tetroxide | 1.0 |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|---|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 301-12-2 | Oxydemeton methyl [S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid] | 1.0 | 51-03-6 | Piperonyl butoxide | 1.0 |
| 19666-30-9 | Oxydiazon [3-[2,4-Dichloro-5-(1- methylethoxy)phenyl]- 5-(1,1- dimethylethyl)-1,3,4-oxadiazol-2(3H)-one] | 1.0 | 29232-93-7 | Pirimiphos methyl [O-(2-(Diethylamino)-6-methyl-4- pyrimidinyl)-O,O-dimethylphosphorothioate] | 1.0 |
| 42874-03-3 | Oxyfluorfen | 1.0 | 1336-36-3 | Polychlorinated biphenyls (PCBs) | * |
| 10028-15-6 | Ozone | 1.0 | 7758-01-2 | Potassium bromate | 0.1 |
| 123-63-7 | Paraldehyde | 1.0 | 128-03-0 | Potassium dimethyldithio- carbamate | 1.0 |
| 1910-42-5 | Paraquat dichloride | 1.0 | 137-41-7 | Potassium N-methyldithio- carbamate | 1.0 |
| 56-38-2 | Parathion [Phosphorothioic acid, O,O-diethyl-O-(4- nitrophenyl)ester] | 1.0 | 41198-08-7 | Profenofos [O-(4-Bromo-2-chlorophenyl)-O-ethyl-S- propyl phosphorothioate] | 1.0 |
| 1114-71-2 | Pebulate [Butylethylcarbamothioic acid S-propyl ester] | 1.0 | 7287-19-6 | Prometryn [N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5- triazine-2,4-diamine] | 1.0 |
| 40487-42-1 | Pendimethalin [N-(1-Ethylpropyl)-3,4-dimethyl-2,6- dinitrobenzenamine] | * | 23950-58-5 | Pronamide | 1.0 |
| 608-93-5 | Pentachlorobenzene | * | 1918-16-7 | Propachlor [2-Chloro-N-(1-methylethyl)-N- phenylacetamide] | 1.0 |
| 76-01-7 | Pentachloroethane | 1.0 | 1120-71-4 | Propane sultone | 0.1 |
| 87-86-5 | Pentachlorophenol (PCP) | 0.1 | 709-98-8 | Propanil [N-(3,4-Dichlorophenyl)propanamide] | 1.0 |
| 57-33-0 | Pentobarbital sodium | 1.0 | 2312-35-8 | Propargite | 1.0 |
| 79-21-0 | Peracetic acid | 1.0 | 107-19-7 | Propargyl alcohol | 1.0 |
| 594-42-3 | Perchloromethyl mercaptan | 1.0 | 31218-83-4 | Propetamphos [3-[(Ethylamino)methoxyphosphinothioyl] oxy]-2-butenic acid, 1-methylethyl ester] | 1.0 |
| 52645-53-1 | Permethrin [3-(2,2-Dichloroethenyl)-2,2- dimethylcyclopropanecarboxylic acid, (3- phenoxyphenyl) methyl ester] | 1.0 | 60207-90-1 | Propiconazole [1-[2-(2,4-Dichlorophenyl)-4-propyl-1,3- dioxolan-2-yl]-methyl-1H-1,2,4,-triazole] | 1.0 |
| 85-01-8 | Phenanthrene | 1.0 | 57-57-8 | beta-Propiolactone | 0.1 |
| 108-95-2 | Phenol | 1.0 | 123-38-6 | Propionaldehyde | 1.0 |
| 26002-80-2 | Phenothrin [2,2-Dimethyl-3-(2-methyl-1- propenyl)cyclopropanecarboxylic acid (3- phenoxyphenyl)methyl ester] | 1.0 | 114-26-1 | Propoxur [Phenol, 2-(1-methylethoxy)-, methylcarbamate] | 1.0 |
| 95-54-5 | 1,2-Phenylenediamine | 1.0 | 115-07-1 | Propylene (Propene) | 1.0 |
| 108-45-2 | 1,3-Phenylenediamine | 1.0 | 75-55-8 | Propyleneimine | 0.1 |
| 106-50-3 | p-Phenylenediamine | 1.0 | 75-56-9 | Propylene oxide | 0.1 |
| 615-28-1 | 1,2-Phenylenediamine dihydro- chloride | 1.0 | 110-86-1 | Pyridine | 1.0 |
| 624-18-0 | 1,4-Phenylenediamine dihydro- chloride | 1.0 | 91-22-5 | Quinoline | 1.0 |
| 90-43-7 | 2-Phenylphenol | 1.0 | 106-51-4 | Quinone | 1.0 |
| 57-41-0 | Phenytol | 0.1 | 82-68-8 | Quintozene (Pentachloronitrobenzene) | 1.0 |
| 75-44-5 | Phosgene | 1.0 | 76578-14-8 | Quizalofop-ethyl [2-[4-[(6-Chloro-2- quinoxalanyl)oxy]phenoxy] propanoic acid ethyl ester] | 1.0 |
| 7803-51-2 | Phosphine | 1.0 | | | |
| 7723-14-0 | Phosphorus (yellow or white) | 1.0 | | | |
| 85-44-9 | Phthalic anhydride | 1.0 | | | |
| 1918-02-1 | Picloram | 1.0 | | | |
| 88-89-1 | Picric acid | 1.0 | | | |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|--|----------------------------|-------------|--|----------------------------|
| 10453-86-8 | Resmethrin | 1.0 | 961-11-5 | Tetrachlorvinphos | 1.0 |
| | [[5-(Phenylmethyl)-3-furanyl]methyl-2,2-dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylate] | | 64-75-5 | [Phosphoric acid, 2-chloro-1-(2,4,5-trichlorophenyl) ethenyl dimethyl ester] | |
| 81-07-2 | Saccharin (manufacturing, no supplier notification) | 1.0 | 7696-12-0 | Tetracycline hydrochloride | 1.0 |
| 94-59-7 | Safrole | 0.1 | | Tetramethrin | 1.0 |
| 7782-49-2 | Selenium | 1.0 | | [2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester] | |
| 74051-80-2 | Sethoxydim | 1.0 | 7440-28-0 | Thallium | 1.0 |
| | [2-[1-(Ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxyl-2-cyclohexen-1-one] | | 148-79-8 | Thiabendazole | 1.0 |
| 7440-22-4 | Silver | 1.0 | | [2-(4-Thiazolyl)-1H-benzimidazole] | |
| 122-34-9 | Simazine | 1.0 | 62-55-5 | Thioacetamide | 0.1 |
| 26628-22-8 | Sodium azide | 1.0 | 28249-77-6 | Thiobencarb | 1.0 |
| 1982-69-0 | Sodium dicamba | 1.0 | | [Carbamic acid, diethylthio-, S-(p-chlorobenzyl)ester] | |
| | [3,6-Dichloro-2-methoxybenzoic acid, sodium salt] | | 139-65-1 | 4,4'-Thiodianiline | 0.1 |
| 128-04-1 | Sodium dimethyldithiocarbamate | 1.0 | 59669-26-0 | Thiodicarb | 1.0 |
| 62-74-8 | Sodium fluoroacetate | 1.0 | 23564-06-9 | Thiophanate ethyl | 1.0 |
| 7632-00-0 | Sodium nitrite | 1.0 | | [[1,2-Phenylenebis(iminocarbonothioyl)]biscarbamic acid diethylester] | |
| 131-52-2 | Sodium pentachlorophenate | 1.0 | 23564-05-8 | Thiophanate methyl | 1.0 |
| 132-27-4 | Sodium o-phenylphenoxide | 0.1 | 79-19-6 | Thiosemicarbazide | 1.0 |
| 100-42-5 | Styrene | 0.1 | 62-56-6 | Thiourea | 0.1 |
| 96-09-3 | Styrene oxide | 0.1 | 137-26-8 | Thiram | 1.0 |
| [7664-93-9 | Sulfuric acid | 1.0 | 1314-20-1 | Thorium dioxide | 1.0 |
| | (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | | 7550-45-0 | Titanium tetrachloride | 1.0 |
| 2699-79-8 | Sulfuryl fluoride (Vikane) | 1.0 | 108-88-3 | Toluene | 1.0 |
| 35400-43-2 | Sulprofos | 1.0 | 584-84-9 | Toluene-2,4-diisocyanate | 0.1 |
| | [O-Ethyl O-[4-(methylthio)phenyl]phosphorodithioic acid S-propylester] | | 91-08-7 | Toluene-2,6-diisocyanate | 0.1 |
| 34014-18-1 | Tebuthiuron | 1.0 | 26471-62-5 | Toluene diisocyanate (mixed isomers) | 0.1 |
| | [N-[5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2-yl]-N,N'-dimethylurea] | | 95-53-4 | o-Toluidine | 0.1 |
| 3383-96-8 | Temephos | 1.0 | 636-21-5 | o-Toluidine hydrochloride | 0.1 |
| 5902-51-2 | Terbacil | 1.0 | 8001-35-2 | Toxaphene | * |
| | [5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione] | | 43121-43-3 | Triadimefon | 1.0 |
| 79-94-7 | Tetrabromobisphenol A | * | | [1-(4-Chlorophenoxy)-3,3-di-methyl-1-(1H-1,2,4-triazol-1-yl)-2-butanone] | |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | 2303-17-5 | Triallate | 1.0 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 | 68-76-8 | Triaziquone | 1.0 |
| 127-18-4 | Tetrachloroethylene | 0.1 | | [2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-] | |
| | (Perchloroethylene) | | 101200-48-0 | Tribenuron methyl | 1.0 |
| 354-11-0 | 1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a) | 1.0 | | [2-[[[(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)-methylamino]-carbonyl]amino]sulfonyl]benzoic acid methyl ester) | |
| 354-14-3 | 1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121) | 1.0 | 1983-10-4 | Tributyltin fluoride | 1.0 |
| | | | 2155-70-6 | Tributyltin methacrylate | 1.0 |
| | | | 78-48-8 | S,S,S-Tributyltrithio-phosphate (DEF) | 1.0 |

Table II

| CAS Number | Chemical Name | De Minimis Limit |
|------------|---|------------------|
| 52-68-6 | Trichlorfon [Phosphoric acid,(2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester] | 1.0 |
| 76-02-8 | Trichloroacetyl chloride | 1.0 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 |
| 71-55-6 | 1,1,1-Trichloroethane (Methyl chloroform) | 1.0 |
| 79-00-5 | 1,1,2-Trichloroethane | 1.0 |
| 79-01-6 | Trichloroethylene | 0.1 |
| 75-69-4 | Trichlorofluoromethane (CFC-11) | 1.0 |
| 95-95-4 | 2,4,5-Trichlorophenol | 1.0 |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.1 |
| 96-18-4 | 1,2,3-Trichloropropane | 0.1 |
| 57213-69-1 | Tricopyr triethylammonium salt | 1.0 |
| 121-44-8 | Triethylamine | 1.0 |
| 1582-09-8 | Trifluralin [Benzeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-] | * |
| 26644-46-2 | Triforine [N,N'-[1,4-Piperazinediylbis-(2,2,2-trichloroethylidene)]bisformamide] | 1.0 |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 |
| 2655-15-4 | 2,3,5-Trimethylphenyl methylcarbamate | 1.0 |
| 639-58-7 | Triphenyltin chloride | 1.0 |
| 76-87-9 | Triphenyltin hydroxide | 1.0 |
| 126-72-7 | Tris(2,3-dibromopropyl) phosphate | 0.1 |
| 72-57-1 | Trypan blue | 0.1 |
| 51-79-6 | Urethane (Ethyl carbamate) | 0.1 |
| 7440-62-2 | Vanadium (except when contained in an alloy) | 1.0 |
| 50471-44-8 | Vinclozolin [3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl-2,4-oxazolidinedione] | 1.0 |
| 108-05-4 | Vinyl acetate | 0.1 |
| 593-60-2 | Vinyl bromide | 0.1 |
| 75-01-4 | Vinyl chloride | 0.1 |
| 75-35-4 | Vinylidene chloride | 1.0 |
| 108-38-3 | m-Xylene | 1.0 |
| 95-47-6 | o-Xylene | 1.0 |
| 106-42-3 | p-Xylene | 1.0 |
| 1330-20-7 | Xylene (mixed isomers) | 1.0 |
| 87-62-7 | 2,6-Xylidine | 0.1 |
| 7440-66-6 | Zinc (fume or dust) | 1.0 |
| 1222-67-7 | Zineb [Carbamodithioic acid, 1,2-ethanediyibis-, zinc complex] | 1.0 |

| b. Individually Listed Toxic Chemicals Arranged by CAS Number | | |
|---|---|------------------|
| CAS Number | Chemical Name | De Minimis Limit |
| 50-00-0 | Formaldehyde | 0.1 |
| 51-03-6 | Piperonyl butoxide | 1.0 |
| 51-21-8 | Fluorouracil (5-Fluorouracil) | 1.0 |
| 51-28-5 | 2,4-Dinitrophenol | 1.0 |
| 51-75-2 | Nitrogen mustard [2-Chloro-N-(2-chloroethyl)-N-methylethanamine] | 0.1 |
| 51-79-6 | Urethane (Ethyl carbamate) | 0.1 |
| 52-68-6 | Trichlorfon [Phosphonic acid, (2,2,2-trichloro-1-hydroxyethyl)-, dimethyl ester] | 1.0 |
| 52-85-7 | Famphur | 1.0 |
| 53-96-3 | 2-Acetylaminofluorene | 0.1 |
| 55-18-5 | N-Nitrosodiethylamine | 0.1 |
| 55-21-0 | Benzamide | 1.0 |
| 55-38-9 | Fenthion [O,O-Dimethyl O-[3-methyl-4-(methylthio)phenyl] ester, phosphorothioic acid] | 1.0 |
| 55-63-0 | Nitroglycerin | 1.0 |
| 56-23-5 | Carbon tetrachloride | 0.1 |
| 56-35-9 | Bis(tributyltin) oxide | 1.0 |
| 56-38-2 | Parathion [Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester] | 1.0 |
| 57-14-7 | 1,1-Dimethylhydrazine | 0.1 |
| 57-33-0 | Pentobarbital sodium | 1.0 |
| 57-41-0 | Phenytoin | 0.1 |
| 57-57-8 | beta-Propiolactone | 0.1 |
| 57-74-9 | Chlordane [4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-] | * |
| 58-89-9 | Lindane [Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1.alpha.,2.alpha.,3.beta.,4.alpha.,5.alpha.,6.beta.)-] | 0.1 |
| 59-89-2 | N-Nitrosomorpholine | 0.1 |
| 60-09-3 | 4-Aminoazobenzene | 0.1 |
| 60-11-7 | 4-Dimethylaminoazobenzene | 0.1 |
| 60-34-4 | Methyl hydrazine | 1.0 |
| 60-35-5 | Acetamide | 0.1 |
| 60-51-5 | Dimethoate | 1.0 |
| 61-82-5 | Amitrole | 0.1 |
| 62-53-3 | Aniline | 1.0 |
| 62-55-5 | Thioacetamide | 0.1 |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|--|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 62-56-6 | Thiourea | 0.1 | 75-44-5 | Phosgene | 1.0 |
| 62-73-7 | Dichlorvos [Phosphoric acid, 2,2-dichloroethenyl dimethyl ester] | 0.1 | 75-45-6 | Chlorodifluoromethane (HCFC-22) | 1.0 |
| 62-74-8 | Sodium fluoroacetate | 1.0 | 75-55-8 | Propyleneimine | 0.1 |
| 62-75-9 | N-Nitrosodimethylamine | 0.1 | 75-56-9 | Propylene oxide | 0.1 |
| 63-25-2 | Carbaryl [1-Naphthalenol, methylcarbamate] | 1.0 | 75-63-8 | Bromotrifluoromethane (Halon 1301) | 1.0 |
| 64-18-6 | Formic acid | 1.0 | 75-65-0 | tert-Butyl alcohol | 1.0 |
| 64-67-5 | Diethyl sulfate | 0.1 | 75-68-3 | 1-Chloro-1,1-difluoroethane (HCFC-142b) | 1.0 |
| 64-75-5 | Tetracycline hydrochloride | 1.0 | 75-69-4 | Trichlorofluoromethane (CFC-11) | 1.0 |
| 67-56-1 | Methanol | 1.0 | 75-71-8 | Dichlorodifluoromethane (CFC-12) | 1.0 |
| 67-63-0 | Isopropyl alcohol (only persons who manufacture by the strong acid process are subject, no supplier notification) | 1.0 | 75-72-9 | Chlorotrifluoromethane (CFC-13) | 1.0 |
| 67-66-3 | Chloroform | 0.1 | 75-86-5 | 2-Methylacetonitrile | 1.0 |
| 67-72-1 | Hexachloroethane | 0.1 | 75-88-7 | 2-Chloro-1,1,1-trifluoroethane (HCFC-133a) | 1.0 |
| 68-12-2 | N,N-Dimethylformamide | 1.0 | 76-01-7 | Pentachloroethane | 1.0 |
| 68-76-8 | Triaziquone [2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1- aziridinyl)-] | 1.0 | 76-02-8 | Trichloroacetyl chloride | 1.0 |
| 70-30-4 | Hexachlorophene | 1.0 | 76-06-2 | Chloropicrin | 1.0 |
| 71-36-3 | n-Butyl alcohol | 1.0 | 76-13-1 | Freon 113 [Ethane, 1,1,2-trichloro-1,2,2,-trifluoro-] | 1.0 |
| 71-43-2 | Benzene | 0.1 | 76-14-2 | Dichlorotetrafluoroethane (CFC-114) | 1.0 |
| 71-55-6 | 1,1,1-Trichloroethane (Methyl chloroform) | 1.0 | 76-15-3 | Monochloropentafluoroethane (CFC-115) | 1.0 |
| 72-43-5 | Methoxychlor [Benzene, 1,1'-(2,2,2- trichloroethylidene)bis[4-methoxy-]] | * | 76-44-8 | Heptachlor [1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a- tetrahydro-4,7-methano-1H-indene] | * |
| 72-57-1 | Trypan blue | 0.1 | 76-87-9 | Triphenyltin hydroxide | 1.0 |
| 74-83-9 | Bromomethane (Methyl bromide) | 1.0 | 77-47-4 | Hexachlorocyclopentadiene | 1.0 |
| 74-85-1 | Ethylene | 1.0 | 77-73-6 | Dicyclopentadiene | 1.0 |
| 74-87-3 | Chloromethane (Methyl chloride) | 1.0 | 77-78-1 | Dimethyl sulfate | 0.1 |
| 74-88-4 | Methyl iodide | 1.0 | 78-48-8 | S,S,S-Tributyltrithiophosphate (DEF) | 1.0 |
| 74-90-8 | Hydrogen cyanide | 1.0 | 78-84-2 | Isobutyraldehyde | 1.0 |
| 74-95-3 | Methylene bromide | 1.0 | 78-87-5 | 1,2-Dichloropropane | 1.0 |
| 75-00-3 | Chloroethane (Ethyl chloride) | 1.0 | 78-88-6 | 2,3-Dichloropropene | 1.0 |
| 75-01-4 | Vinyl chloride | 0.1 | 78-92-2 | sec-Butyl alcohol | 1.0 |
| 75-05-8 | Acetonitrile | 1.0 | 78-93-3 | Methyl ethyl ketone | 1.0 |
| 75-07-0 | Acetaldehyde | 0.1 | 79-00-5 | 1,1,2-Trichloroethane | 1.0 |
| 75-09-2 | Dichloromethane (Methylene chloride) | 0.1 | 79-01-6 | Trichloroethylene | 0.1 |
| 75-15-0 | Carbon disulfide | 1.0 | 79-06-1 | Acrylamide | 0.1 |
| 75-21-8 | Ethylene oxide | 0.1 | 79-10-7 | Acrylic acid | 1.0 |
| 75-25-2 | Bromoform (Tribromomethane) | 1.0 | 79-11-8 | Chloroacetic acid | 1.0 |
| 75-27-4 | Dichlorobromomethane | 0.1 | 79-19-6 | Thiosemicarbazide | 1.0 |
| 75-34-3 | Ethylidene dichloride | 1.0 | 79-21-0 | Peracetic acid | 1.0 |
| 75-35-4 | Vinylidene chloride | 1.0 | 79-22-1 | Methyl chlorocarbonate | 1.0 |
| 75-43-4 | Dichlorofluoromethane (HCFC-21) | 1.0 | 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.0 |
| | | | 79-44-7 | Dimethylcarbamyl chloride | 0.1 |
| | | | 79-46-9 | 2-Nitropropane | 0.1 |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|---|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 79-94-7 | Tetrabromobisphenol A | * | 95-69-2 | p-Chloro-o-toluidine | 0.1 |
| 80-05-7 | 4,4'-Isopropylidenediphenol | 1.0 | 95-80-7 | 2,4-Diaminotoluene | 0.1 |
| 80-15-9 | Cumene hydroperoxide | 1.0 | 95-95-4 | 2,4,5-Trichlorophenol | 1.0 |
| 80-62-6 | Methyl methacrylate | 1.0 | 96-09-3 | Styrene oxide | 0.1 |
| 81-07-2 | Saccharin (manufacturing, no supplier notification) | 1.0 | 96-12-8 | 1,2-Dibromo-3-chloropropane (DBCP) | 0.1 |
| 81-88-9 | C.I. Food Red 15 | 1.0 | 96-18-4 | 1,2,3-Trichloropropane | 0.1 |
| 82-28-0 | 1-Amino-2-methylantraquinone | 0.1 | 96-33-3 | Methyl acrylate | 1.0 |
| 82-68-8 | Quintozene [Pentachloronitrobenzene] | 1.0 | 96-45-7 | Ethylene thiourea | 0.1 |
| 84-74-2 | Dibutyl phthalate | 1.0 | 97-23-4 | Dichlorophene [2,2'-Methylenebis(4-chlorophenol)] | 1.0 |
| 85-01-8 | Phenanthrene | 1.0 | 97-56-3 | C.I. Solvent Yellow 3 | 0.1 |
| 85-44-9 | Phthalic anhydride | 1.0 | 98-07-7 | Benzoic trichloride (Benzotrichloride) | 0.1 |
| 86-30-6 | N-Nitrosodiphenylamine | 1.0 | 98-82-8 | Cumene | 1.0 |
| 87-62-7 | 2,6-Xylidine | 0.1 | 98-86-2 | Acetophenone | 1.0 |
| 87-68-3 | Hexachloro-1,3-butadiene | 1.0 | 98-87-3 | Benzal chloride | 1.0 |
| 87-86-5 | Pentachlorophenol (PCP) | 0.1 | 98-88-4 | Benzoyl chloride | 1.0 |
| 88-06-2 | 2,4,6-Trichlorophenol | 0.1 | 98-95-3 | Nitrobenzene | 0.1 |
| 88-75-5 | 2-Nitrophenol | 1.0 | 99-30-9 | Dichloran [2,6-Dichloro-4-nitroaniline] | 1.0 |
| 88-85-7 | Dinitrobutyl phenol (Dinoseb) | 1.0 | 99-55-8 | 5-Nitro-o-toluidine | 1.0 |
| 88-89-1 | Picric acid | 1.0 | 99-59-2 | 5-Nitro-o-anisidine | 1.0 |
| 90-04-0 | o-Anisidine | 0.1 | 99-65-0 | m-Dinitrobenzene | 1.0 |
| 90-43-7 | 2-Phenylphenol | 1.0 | 100-01-6 | p-Nitroaniline | 1.0 |
| 90-94-8 | Michler's ketone | 0.1 | 100-02-7 | 4-Nitrophenol | 1.0 |
| 91-08-7 | Toluene-2,6-diisocyanate | 0.1 | 100-25-4 | p-Dinitrobenzene | 1.0 |
| 91-20-3 | Naphthalene | 1.0 | 100-41-4 | Ethylbenzene | 0.1 |
| 91-22-5 | Quinoline | 1.0 | 100-42-5 | Styrene | 0.1 |
| 91-59-8 | beta-Naphthylamine | 0.1 | 100-44-7 | Benzyl chloride | 1.0 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.1 | 100-75-4 | N-Nitrosopiperidine | 0.1 |
| 92-52-4 | Biphenyl | 1.0 | 101-05-3 | Anilazine [4,6-Dichloro-N-(2-chlorophenyl)-1,3,5-triazin-2-amine] | 1.0 |
| 92-67-1 | 4-Aminobiphenyl | 0.1 | 101-14-4 | 4,4'-Methylenebis(2-chloroaniline) (MBOCA) | 0.1 |
| 92-87-5 | Benzidine | 0.1 | 101-61-1 | 4,4'-Methylenebis(N,N-dimethyl)benzenamine | 0.1 |
| 92-93-3 | 4-Nitrobiphenyl | 0.1 | 101-77-9 | 4,4'-Methylenedianiline | 0.1 |
| 93-65-2 | Mecoprop | 0.1 | 101-80-4 | 4,4'-Diaminodiphenyl ether | 0.1 |
| 94-11-1 | 2,4-D isopropyl ester | 0.1 | 101-90-6 | Diglycidyl resorcinol ether | 0.1 |
| 94-36-0 | Benzoyl peroxide | 1.0 | 104-12-1 | p-Chlorophenyl isocyanate | 1.0 |
| 94-58-6 | Dihydrosafrole | 0.1 | 104-94-9 | p-Anisidine | 1.0 |
| 94-59-7 | Safrole | 0.1 | 105-67-9 | 2,4-Dimethylphenol | 1.0 |
| 94-74-6 | Methoxone ((4-Chloro-2-methylphenoxy) acetic acid) (MCPA) | 0.1 | 106-42-3 | p-Xylene | 1.0 |
| 94-75-7 | 2,4-D [Acetic acid, (2,4-dichlorophenoxy)-] | 0.1 | 106-44-5 | p-Cresol | 1.0 |
| 94-80-4 | 2,4-D butyl ester | 0.1 | 106-46-7 | 1,4-Dichlorobenzene | 0.1 |
| 94-82-6 | 2,4-DB | 1.0 | 106-47-8 | p-Chloroaniline | 0.1 |
| 95-47-6 | o-Xylene | 1.0 | 106-50-3 | p-Phenylenediamine | 1.0 |
| 95-48-7 | o-Cresol | 1.0 | 106-51-4 | Quinone | 1.0 |
| 95-50-1 | 1,2-Dichlorobenzene | 1.0 | | | |
| 95-53-4 | o-Toluidine | 0.1 | | | |
| 95-54-5 | 1,2-Phenylenediamine | 1.0 | | | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 1.0 | | | |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|--|----------------------------|------------|---|----------------------------|
| 106-88-7 | 1,2-Butylene oxide | 0.1 | 119-93-7 | 3,3'-Dimethylbenzidine (o-Tolidine) | 0.1 |
| 106-89-8 | Epichlorohydrin | 0.1 | 120-12-7 | Anthracene | 1.0 |
| 106-93-4 | 1,2-Dibromoethane (Ethylene dibromide) | 0.1 | 120-36-5 | 2,4-DP | 0.1 |
| 106-99-0 | 1,3-Butadiene | 0.1 | 120-58-1 | Isosafrole | 1.0 |
| 107-02-8 | Acrolein | 1.0 | 120-71-8 | p-Cresidine | 0.1 |
| 107-05-1 | Allyl chloride | 1.0 | 120-80-9 | Catechol | 0.1 |
| 107-06-2 | 1,2-Dichloroethane (Ethylene dichloride) | 0.1 | 120-82-1 | 1,2,4-Trichlorobenzene | 1.0 |
| 107-11-9 | Allylamine | 1.0 | 120-83-2 | 2,4-Dichlorophenol | 1.0 |
| 107-13-1 | Acrylonitrile | 0.1 | 121-14-2 | 2,4-Dinitrotoluene | 0.1 |
| 107-18-6 | Allyl alcohol | 1.0 | 121-44-8 | Triethylamine | 1.0 |
| 107-19-7 | Propargyl alcohol | 1.0 | 121-69-7 | N,N-Dimethylaniline | 1.0 |
| 107-21-1 | Ethylene glycol | 1.0 | 121-75-5 | Malathion | 1.0 |
| 107-30-2 | Chloromethyl methyl ether | 0.1 | 122-34-9 | Simazine | 1.0 |
| 108-05-4 | Vinyl acetate | 0.1 | 122-39-4 | Diphenylamine | 1.0 |
| 108-10-1 | Methyl isobutyl ketone | 1.0 | 122-66-7 | 1,2-Diphenylhydrazine (Hydrazobenzene) | 0.1 |
| 108-31-6 | Maleic anhydride | 1.0 | 123-31-9 | Hydroquinone | 1.0 |
| 108-38-3 | m-Xylene | 1.0 | 123-38-6 | Propionaldehyde | 1.0 |
| 108-39-4 | m-Cresol | 1.0 | 123-63-7 | Paraldehyde | 1.0 |
| 108-45-2 | 1,3-Phenylenediamine | 1.0 | 123-72-8 | Butyraldehyde | 1.0 |
| 108-60-1 | Bis(2-chloro-1-methylethyl) ether | 1.0 | 123-91-1 | 1,4-Dioxane | 0.1 |
| 108-88-3 | Toluene | 1.0 | 124-40-3 | Dimethylamine | 1.0 |
| 108-90-7 | Chlorobenzene | 1.0 | 124-73-2 | Dibromotetrafluoroethane (Halon 2402) | 1.0 |
| 108-93-0 | Cyclohexanol | 1.0 | 126-72-7 | Tris(2,3-dibromopropyl) phosphate | 0.1 |
| 108-95-2 | Phenol | 1.0 | 126-98-7 | Methacrylonitrile | 1.0 |
| 109-06-8 | 2-Methylpyridine | 1.0 | 126-99-8 | Chloroprene | 0.1 |
| 109-77-3 | Malononitrile | 1.0 | 127-18-4 | Tetrachloroethylene (Perchloroethylene) | 0.1 |
| 109-86-4 | 2-Methoxyethanol | 1.0 | 128-03-0 | Potassium dimethyldithiocarbamate | 1.0 |
| 110-54-3 | n-Hexane | 1.0 | 128-04-1 | Sodium dimethyldithiocarbamate | 1.0 |
| 110-57-6 | trans-1,4-Dichloro-2-butene | 1.0 | 128-66-5 | C.I. Vat Yellow 4 | 1.0 |
| 110-80-5 | 2-Ethoxyethanol | 1.0 | 131-11-3 | Dimethyl phthalate | 1.0 |
| 110-82-7 | Cyclohexane | 1.0 | 131-52-2 | Sodium pentachlorophenate | 1.0 |
| 110-86-1 | Pyridine | 1.0 | 132-27-4 | Sodium o-phenylphenoxide | 0.1 |
| 111-42-2 | Diethanolamine | 1.0 | 132-64-9 | Dibenzofuran | 1.0 |
| 111-44-4 | Bis(2-chloroethyl) ether | 1.0 | 133-06-2 | Captan | 1.0 |
| 111-91-1 | Bis(2-chloroethoxy) methane | 1.0 | | [1H-Isoindole-1,3(2H)-dione, 3a,4,7,7a- tetrahydro-2-[(trichloromethyl)thio]-] | |
| 114-26-1 | Propoxur [Phenol, 2-(1-methylethoxy)-, methylcarbamate] | 1.0 | 133-07-3 | Folpet | 1.0 |
| 115-07-1 | Propylene (Propene) | 1.0 | 133-90-4 | Chloramben [Benzoic acid, 3-amino-2,5-dichloro-] | 1.0 |
| 115-28-6 | Chlorendic acid | 0.1 | 134-29-2 | o-Anisidine hydrochloride | 0.1 |
| 115-32-2 | Dicofol [Benzenemethanol, 4-chloro-.alpha.-4- (chlorophenyl)-.alpha.-(trichloromethyl)-] | 1.0 | 134-32-7 | alpha-Naphthylamine | 0.1 |
| 116-06-3 | Aldicarb | 1.0 | 135-20-6 | Cupferron | 0.1 |
| 117-79-3 | 2-Aminoanthraquinone | 0.1 | | [Benzeneamine, N-hydroxy-N-nitroso, ammonium salt] | |
| 117-81-7 | Di(2-ethylhexyl) phthalate | 0.1 | 136-45-8 | Dipropyl isocinchomerate | 1.0 |
| 118-74-1 | Hexachlorobenzene | * | | | |
| 119-90-4 | 3,3'-Dimethoxybenzidine | 0.1 | | | |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|---|----------------------------|------------|---|----------------------------|
| 137-26-8 | Thiram | 1.0 | 354-25-6 | 1-Chloro-1,1,2,2-tetrafluoroethane (HCFC-124a) | 1.0 |
| 137-41-7 | Potassium N-methyldithiocarbamate | 1.0 | 357-57-3 | Brucine | 1.0 |
| 137-42-8 | Metham sodium (Sodium methyldithiocarbamate) | 1.0 | 422-44-6 | 1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb) | 1.0 |
| 138-93-2 | Disodium cyanodithioimidocarbonate | 1.0 | 422-48-0 | 2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba) | 1.0 |
| 139-13-9 | Nitrilotriacetic acid | 0.1 | 422-56-0 | 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca) | 1.0 |
| 139-65-1 | 4,4'-Thiodianiline | 0.1 | 431-86-7 | 1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da) | 1.0 |
| 140-88-5 | Ethyl acrylate | 0.1 | 460-35-5 | 3-Chloro-1,1,1-trifluoropropane (HCFC-253fb) | 1.0 |
| 141-32-2 | Butyl acrylate | 1.0 | 463-58-1 | Carbonyl sulfide | 1.0 |
| 142-59-6 | Nabam | 1.0 | 465-73-6 | Isodrin | * |
| 148-79-8 | Thiabendazole | 1.0 | 492-80-8 | C.I. Solvent Yellow 34 (Auramine) | 0.1 |
| 149-30-4 | [2-(4-Thiazolyl)-1H-benzimidazole] | 1.0 | 505-60-2 | Mustard gas | 0.1 |
| 150-50-5 | Merphos | 1.0 | 507-55-1 | [Ethane, 1,1'-thiobis[2-chloro-]] | 1.0 |
| 150-68-5 | Monuron | 1.0 | 510-15-6 | 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb) | 1.0 |
| 151-56-4 | Ethyleneimine (Aziridine) | 0.1 | 510-15-6 | Chlorobenzilate | 1.0 |
| 156-10-5 | p-Nitrosodiphenylamine | 1.0 | 528-29-0 | [Benzeneacetic acid, 4-chloro-.alpha.-(4-chlorophenyl)-.alpha.-hydroxy-, ethyl ester] | 1.0 |
| 156-62-7 | Calcium cyanamide | 1.0 | 532-27-4 | o-Dinitrobenzene | 1.0 |
| 191-24-2 | Benzo(g,h,i)perylene | * | 533-74-4 | 2-Chloroacetophenone | 1.0 |
| 298-00-0 | Methyl parathion | 1.0 | 533-74-4 | Dazomet | 1.0 |
| 300-76-5 | Naled | 1.0 | 534-52-1 | (Tetrahydro-3,5-dimethyl-2H-1,3,5-thiadiazine-2-thione) | 1.0 |
| 301-12-2 | Oxydemeton methyl | 1.0 | 540-59-0 | 4,6-Dinitro-o-cresol | 1.0 |
| 302-01-2 | [S-(2-(Ethylsulfinyl)ethyl) O,O-dimethyl ester phosphorothioic acid] | 0.1 | 541-41-3 | 1,2-Dichloroethylene | 1.0 |
| 306-83-2 | Hydrazine | 0.1 | 541-53-7 | Ethyl chloroformate | 1.0 |
| 309-00-2 | 2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123) | 1.0 | 541-73-1 | 2,4-Dithiobiuret | 1.0 |
| 309-00-2 | Aldrin | * | 541-73-1 | 1,3-Dichlorobenzene | 1.0 |
| 309-00-2 | [1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1.alpha.,4.alpha.,4a.beta.,5.alpha.,8.alpha.,8a.beta.)-] | 1.0 | 542-75-6 | 1,3-Dichloropropylene | 0.1 |
| 314-40-9 | Bromacil | 1.0 | 542-76-7 | 3-Chloropropionitrile | 1.0 |
| 314-40-9 | (5-Bromo-6-methyl-3-(1-methylpropyl)-2,4(1H,3H)-pyrimidinedione) | 1.0 | 542-88-1 | Bis(chloromethyl) ether | 0.1 |
| 319-84-6 | alpha-Hexachlorocyclohexane | 0.1 | 554-13-2 | Lithium carbonate | 1.0 |
| 330-54-1 | Diuron | 1.0 | 556-61-6 | Methyl isothiocyanate | 1.0 |
| 330-55-2 | Linuron | 1.0 | 563-47-3 | [Isothiocyanatomethane] | 0.1 |
| 333-41-5 | Diazinon | 1.0 | 569-64-2 | 3-Chloro-2-methyl-1-propene | 0.1 |
| 334-88-3 | Diazomethane | 1.0 | 584-84-9 | C.I. Basic Green 4 | 1.0 |
| 353-59-3 | Bromochlorodifluoromethane (Halon 1211) | 1.0 | 593-60-2 | Toluene-2,4-diisocyanate | 0.1 |
| 353-59-3 | Bromochlorodifluoromethane (Halon 1211) | 1.0 | 594-42-3 | Vinyl bromide | 0.1 |
| 354-11-0 | 1,1,1,2-Tetrachloro-2-fluoroethane (HCFC-121a) | 1.0 | 594-42-3 | Perchloromethyl mercaptan | 1.0 |
| 354-14-3 | 1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121) | 1.0 | 606-20-2 | 2,6-Dinitrotoluene | 0.1 |
| 354-23-4 | 1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a) | 1.0 | 608-93-5 | Pentachlorobenzene | * |
| 354-23-4 | 1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a) | 1.0 | 612-82-8 | 3,3'-Dimethylbenzidine dihydrochloride (o-Tolidine dihydrochloride) | 0.1 |
| 354-23-4 | 1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a) | 1.0 | 612-83-9 | 3,3'-Dichlorobenzidine dihydrochloride | 0.1 |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|--|----------------------------|------------|--|----------------------------|
| 615-05-4 | 2,4-Diaminoanisole | 0.1 | 1582-09-8 | Trifluralin | * |
| 615-28-1 | 1,2-Phenylenediamine dihydrochloride | 1.0 | | [Benzeneamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-] | |
| 621-64-7 | N-Nitrosodi-n-propylamine | 0.1 | 1634-04-4 | Methyl tert-butyl ether | 1.0 |
| 624-18-0 | 1,4-Phenylenediamine dihydrochloride | 1.0 | 1649-08-7 | 1,2-Dichloro-1,1-difluoroethane (HCFC-132b) | 1.0 |
| 624-83-9 | Methyl isocyanate | 1.0 | 1689-84-5 | Bromoxynil (3,5-Dibromo-4-hydroxybenzoxynil) | 1.0 |
| 630-20-6 | 1,1,1,2-Tetrachloroethane | 1.0 | 1689-99-2 | Bromoxynil octanoate (Octanoic acid, 2,6-dibromo-4-cyanophenyl ester) | 1.0 |
| 636-21-5 | o-Toluidine hydrochloride | 0.1 | 1717-00-6 | 1,1-Dichloro-1-fluoroethane (HCFC-141b) | 1.0 |
| 639-58-7 | Triphenyltin chloride | 1.0 | 1836-75-5 | Nitrofen | 0.1 |
| 680-31-9 | Hexamethylphosphoramide | 0.1 | | [Benzene, 2,4-dichloro-1-(4-nitrophenoxy)-] | |
| 684-93-5 | N-Nitroso-N-methylurea | 0.1 | 1861-40-1 | Benfluralin (N-Butyl-N-ethyl-2,6-dinitro-4-(trifluoromethyl)benzenamine) | 1.0 |
| 709-98-8 | Propanil (N-(3,4-Dichlorophenyl) propanamide) | 1.0 | 1897-45-6 | Chlorothalonil [1,3-Benzenedicarbonitrile, 2,4,5,6-tetrachloro-] | 0.1 |
| 759-73-9 | N-Nitroso-N-ethylurea | 0.1 | 1910-42-5 | Paraquat dichloride | 1.0 |
| 759-94-4 | Ethyl dipropylthiocarbamate (EPTC) | 1.0 | 1912-24-9 | Atrazine (6-Chloro-N-ethyl-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine) | 1.0 |
| 764-41-0 | 1,4-Dichloro-2-butene | 1.0 | 1918-00-9 | Dicamba (3,6-Dichloro-2-methoxybenzoic acid) | 1.0 |
| 812-04-4 | 1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b) | 1.0 | 1918-02-1 | Picloram | 1.0 |
| 834-12-8 | Ametryn (N-Ethyl-N'-(1-methylethyl)-6-(methylthio)-1,3,5-triazine-2,4-diamine) | 1.0 | 1918-16-7 | Propachlor [2-Chloro-N-(1-methylethyl)-N-phenylacetamide] | 1.0 |
| 842-07-9 | C.I. Solvent Yellow 14 | 1.0 | 1928-43-4 | 2,4-D 2-ethylhexyl ester | 0.1 |
| 872-50-4 | N-Methyl-2-pyrrolidone | 1.0 | 1929-73-3 | 2,4-D butoxyethyl ester | 0.1 |
| 924-16-3 | N-Nitrosodi-n-butylamine | 0.1 | 1929-82-4 | Nitrapyrin (2-Chloro-6-(trichloromethyl)pyridine) | 1.0 |
| 924-42-5 | N-Methylolacrylamide | 1.0 | 1937-37-7 | C.I. Direct Black 38 | 0.1 |
| 957-51-7 | Diphenamid | 1.0 | 1982-69-0 | Sodium dicamba [3,6-Dichloro-2-methoxybenzoic acid, sodium salt] | 1.0 |
| 961-11-5 | Tetrachlorvinphos [Phosphoric acid, 2-chloro-1-(2,4,5-trichlorophenyl)ethyldimethyl ester] | 1.0 | 1983-10-4 | Tributyltin fluoride | 1.0 |
| 989-38-8 | C.I. Basic Red 1 | 1.0 | 2032-65-7 | Methiocarb | 1.0 |
| 1114-71-2 | Pebulate [Butylethylcarbamothioic acid S-propyl ester] | 1.0 | 2155-70-6 | Tributyltin methacrylate | 1.0 |
| 1120-71-4 | Propane sultone | 0.1 | 2164-07-0 | Dipotassium endothall [7-Oxabicyclo(2.2.1)heptane-2,3-dicarboxylic acid, dipotassium salt] | 1.0 |
| 1134-23-2 | Cycloate | 1.0 | 2164-17-2 | Fluometuron [Urea, N,N-dimethyl-N'-[3-(trifluoromethyl)phenyl]-] | 1.0 |
| 1163-19-5 | Decabromodiphenyl oxide | 1.0 | 2212-67-1 | Molinate (1H-Azepine-1-carbothioic acid, hexahydro-S-ethyl ester) | 1.0 |
| 1313-27-5 | Molybdenum trioxide | 1.0 | | | |
| 1314-20-1 | Thorium dioxide | 1.0 | | | |
| 1319-77-3 | Cresol (mixed isomers) | 1.0 | | | |
| 1320-18-9 | 2,4-D propylene glycol butyl ether ester | 0.1 | | | |
| 1330-20-7 | Xylene (mixed isomers) | 1.0 | | | |
| 1332-21-4 | Asbestos (friable) | 0.1 | | | |
| 1335-87-1 | Hexachloronaphthalene | 1.0 | | | |
| 1336-36-3 | Polychlorinated biphenyls (PCBs) | * | | | |
| 1344-28-1 | Aluminum oxide (fibrous forms) | 1.0 | | | |
| 1464-53-5 | Diepoxybutane | 0.1 | | | |
| 1563-66-2 | Carbofuran | 1.0 | | | |

Table II

| | | | <i>De Minimis</i> | | |
|------------|---|-------|-------------------|--|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 2234-13-1 | Octachloronaphthalene | 1.0 | 7440-02-0 | Nickel | 0.1 |
| 2300-66-5 | Dimethylamine dicamba | 1.0 | 7440-22-4 | Silver | 1.0 |
| 2303-16-4 | Diallate | 1.0 | 7440-28-0 | Thallium | 1.0 |
| | [Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester] | | 7440-36-0 | Antimony | 1.0 |
| 2303-17-5 | Triallate | 1.0 | 7440-38-2 | Arsenic | 0.1 |
| 2312-35-8 | Propargite | 1.0 | 7440-39-3 | Barium | 1.0 |
| 2439-01-2 | Chinomethionat | 1.0 | 7440-41-7 | Beryllium | 0.1 |
| | [6-Methyl-1,3-dithiolo[4,5-b]quinoxalin-2-one] | | 7440-43-9 | Cadmium | 0.1 |
| 2439-10-3 | Dodine | 1.0 | 7440-47-3 | Chromium | 1.0 |
| | [Dodecylguanidine monoacetate] | | 7440-48-4 | Cobalt | 0.1 |
| 2524-03-0 | Dimethyl chlorothiophosphate | 1.0 | 7440-50-8 | Copper | 1.0 |
| 2602-46-2 | C.I. Direct Blue 6 | 0.1 | 7440-62-2 | Vanadium (except when contained in an alloy) | 1.0 |
| 2655-15-4 | 2,3,5-Trimethylphenyl methyl carbamate | 1.0 | 7440-66-6 | Zinc (fume or dust) | 1.0 |
| 2699-79-8 | Sulfuryl fluoride (Vikane) | 1.0 | 7550-45-0 | Titanium tetrachloride | 1.0 |
| 2702-72-9 | 2,4-D sodium salt | 0.1 | 7632-00-0 | Sodium nitrite | 1.0 |
| 2832-40-8 | C.I. Disperse Yellow 3 | 1.0 | 7637-07-2 | Boron trifluoride | 1.0 |
| 2837-89-0 | 2-Chloro-1,1,1,2-tetrafluoroethane (HCFC-124) | 1.0 | 7647-01-0 | Hydrochloric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | 1.0 |
| 2971-38-2 | 2,4-D Chlorocrotyl ester | 0.1 | 7664-39-3 | Hydrogen fluoride | 1.0 |
| 3118-97-6 | C.I. Solvent Orange 7 | 1.0 | 7664-41-7 | Ammonia (includes anhydrous ammonia and aqueous ammonia from water dissociable ammonium salts and other sources; 10 percent of total aqueous ammonia is reportable under this listing) | 1.0 |
| 3383-96-8 | Temephos | 1.0 | | | |
| 3653-48-3 | Methoxone sodium salt ((4-Chloro-2-methylphenoxy) acetate sodium salt) | 0.1 | 7664-93-9 | Sulfuric acid (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size) | 1.0 |
| 3761-53-3 | C.I. Food Red 5 | 0.1 | | | |
| 4080-31-3 | 1-(3-Chloroallyl)-3,5,7-triaza-1-azoniaadamantane chloride | 1.0 | 7696-12-0 | Tetramethrin [2,2-Dimethyl-3-(2-methyl-1-propenyl)cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3-dioxo-2H-isoindol-2-yl)methyl ester] | 1.0 |
| 4170-30-3 | Crotonaldehyde | 1.0 | 7697-37-2 | Nitric acid | 1.0 |
| 4549-40-0 | N-Nitrosomethylvinylamine | 0.1 | 7723-14-0 | Phosphorus (yellow or white) | 1.0 |
| 4680-78-8 | C.I. Acid Green 3 | 1.0 | 7726-95-6 | Bromine | 1.0 |
| 5234-68-4 | Carboxin (5,6-Dihydro-2-methyl-N-phenyl-1,4-oxathiin-3-carboxamide) | 1.0 | 7758-01-2 | Potassium bromate | 0.1 |
| 5598-13-0 | Chlorpyrifos methyl [O,O-Dimethyl-O-(3,5,6-trichloro-2-pyridyl)phosphorothioate] | 1.0 | 7782-41-4 | Fluorine | 1.0 |
| 5902-51-2 | Terbacil [5-Chloro-3-(1,1-dimethylethyl)-6-methyl-2,4(1H,3H)-pyrimidinedione] | 1.0 | 7782-49-2 | Selenium | 1.0 |
| 6459-94-5 | C.I. Acid Red 114 | 0.1 | 7782-50-5 | Chlorine | 1.0 |
| 7287-19-6 | Prometryn [N,N'-Bis(1-methylethyl)-6-methylthio-1,3,5-triazine-2,4-diamine] | 1.0 | 7786-34-7 | Mevinphos | 1.0 |
| 7429-90-5 | Aluminum (fume or dust) | 1.0 | 7803-51-2 | Phosphine | 1.0 |
| 7439-92-1 | Lead (when lead is contained in stainless steel, brass or bronze alloys the <i>de minimis</i> level is 0.1) | * | 8001-35-2 | Toxaphene | * |
| | | | 8001-58-9 | Creosote | 0.1 |
| | | | 9006-42-2 | Metiram | 1.0 |
| | | | 10028-15-6 | Ozone | 1.0 |
| | | | 10034-93-2 | Hydrazine sulfate | 0.1 |
| 7439-96-5 | Manganese | 1.0 | 10049-04-4 | Chlorine dioxide | 1.0 |
| 7439-97-6 | Mercury | * | | | |

Table II

| CAS Number | Chemical Name | <i>De Minimis</i> Limit | CAS Number | Chemical Name | <i>De Minimis</i> Limit |
|------------|--|----------------------------|------------|---|----------------------------|
| 10061-02-6 | trans-1,3-Dichloropropene | 0.1 | 23564-06-9 | Thiophanate ethyl [[1,2-Phenylenebis(iminocarbonothioyl)] biscarbamic acid diethyl ester] | 1.0 |
| 10294-34-5 | Boron trichloride | 1.0 | 23950-58-5 | Pronamide | 1.0 |
| 10453-86-8 | Resmethrin | 1.0 | 25311-71-1 | Isofenphos [2-[[Ethoxyl[(1-methylethyl)- amino]phosphinothioyl]oxy]benzoic acid 1- methylethyl ester] | 1.0 |
| 12122-67-7 | Zineb [Carbamodithioic acid, 1,2-ethanediybis-, zinc complex] | 1.0 | 25321-14-6 | Dinitrotoluene (mixed isomers) | 1.0 |
| 12427-38-2 | Maneb [Carbamodithioic acid, 1,2-ethanediybis-, manganese complex] | 1.0 | 25321-22-6 | Dichlorobenzene (mixed isomers) | 0.1 |
| 13194-48-4 | Ethoprop [Phosphorodithioic acid O-ethyl S,S- dipropyl ester] | 1.0 | 25376-45-8 | Diaminotoluene (mixed isomers) | 0.1 |
| 13356-08-6 | Fenbutatin oxide (Hexakis(2-methyl-2-phenylpropyl) distannoxane) | 1.0 | 26002-80-2 | Phenothrin [2,2-Dimethyl-3-(2-methyl-1- propenyl)cyclopropanecarboxylic acid (3- phenoxyphenyl)methyl ester] | 1.0 |
| 13463-40-6 | Iron pentacarbonyl | 1.0 | 26471-62-5 | Toluene diisocyanate (mixed isomers) | 0.1 |
| 13474-88-9 | 1,1-Dichloro-1,2,2,3,3- pentafluoropropane (HCFC-225cc) | 1.0 | 26628-22-8 | Sodium azide | 1.0 |
| 13684-56-5 | Desmedipham | 1.0 | 26644-46-2 | Triforine | 1.0 |
| 14484-64-1 | Ferbam [Tris(dimethylcarbamodithioato-S,S')iron] | 1.0 | 27314-13-2 | Norflurazon [4-Chloro-5-(methylamino)-2-[3- (trifluoromethyl)phenyl]-3(2H)-pyridazinone] | 1.0 |
| 15972-60-8 | Alachlor | 1.0 | 28057-48-9 | d-trans-Allethrin [d-trans-Chrysanthemic acid of d-allethrine] | 1.0 |
| 16071-86-6 | C.I. Direct Brown 95 | 0.1 | 28249-77-6 | Thiobencarb [Carbamic acid, diethylthio-, S-(p- chlorobenzyl)ester] | 1.0 |
| 16543-55-8 | N-Nitrosornicotine | 0.1 | 28407-37-6 | C.I. Direct Blue 218 | 1.0 |
| 17804-35-2 | Benomyl | 1.0 | 29082-74-4 | Octachlorostyrene | * |
| 19044-88-3 | Oryzalin [4-(Dipropylamino)-3,5- dinitrobenzenesulfonamide] | 1.0 | 29232-93-7 | Pirimiphos methyl [O-(2-(Diethylamino)-6-methyl-4- pyrimidinyl)-O,O-dimethylphosphorothioate] | 1.0 |
| 19666-30-9 | Oxydiazon [3-[2,4-Dichloro-5-(1-methylethoxy) phenyl]-5-(1,1-dimethylethyl)-1,3,4- oxadiazol-2(3H)-one] | 1.0 | 30560-19-1 | Acephate (Acetylphosphoramidothioic acid O,S- dimethyl ester) | 1.0 |
| 20325-40-0 | 3,3'-Dimethoxybenzidine dihydrochloride (o-Dianisidine dihydrochloride) | 0.1 | 31218-83-4 | Propetamphos [3-[(Ethylamino) methoxyphosphinothioyl]oxy]-2-butenic acid, 1-methylethyl ester] | 1.0 |
| 20354-26-1 | Methazole [2-(3,4-Dichlorophenyl)-4-methyl-1,2,4- oxadiazolidine-3,5-dione] | 1.0 | 33089-61-1 | Amitraz | 1.0 |
| 20816-12-0 | Osmium tetroxide | 1.0 | 34014-18-1 | Tebuthiuron [N-[5-(1,1-Dimethylethyl)-1,3,4-thiadiazol-2- yl]-N,N'-dimethylurea] | 1.0 |
| 20859-73-8 | Aluminum phosphide | 1.0 | 34077-87-7 | Dichlorotrifluoroethane | 1.0 |
| 21087-64-9 | Metribuzin | 1.0 | 35367-38-5 | Diflubenzuron | 1.0 |
| 21725-46-2 | Cyanazine | 1.0 | | | |
| 22781-23-3 | Bendiocarb [2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate] | 1.0 | | | |
| 23564-05-8 | Thiophanate methyl | 1.0 | | | |

Table II

| <i>De Minimis</i> | | | <i>De Minimis</i> | | |
|-------------------|--|-------|-------------------|---|-------|
| CAS Number | Chemical Name | Limit | CAS Number | Chemical Name | Limit |
| 35400-43-2 | Sulprofos [O-Ethyl O-[4-(methylthio)phenyl]- phosphorodithioic acid S-propyl ester] | 1.0 | 55406-53-6 | 3-Iodo-2-propynyl butyl carbamate | 1.0 |
| 35554-44-0 | Imazalil [1-[2-(2,4-Dichlorophenyl)-2-(2- propenyloxy)ethyl]-1H-imidazole] | 1.0 | 57213-69-1 | Triclopyr triethylammonium salt | 1.0 |
| 35691-65-7 | 1-Bromo-1-(bromomethyl)-1,3- propanedicarbonitrile | 1.0 | 59669-26-0 | Thiodicarb | 1.0 |
| 38727-55-8 | Diethatyl ethyl | 1.0 | 60168-88-9 | Fenarimol [.alpha.-(2-Chlorophenyl)-.alpha.-(4- chlorophenyl)-5-pyrimidinemethanol] | 1.0 |
| 39156-41-7 | 2,4-Diaminoanisole sulfate | 0.1 | 60207-90-1 | Propiconazole | 1.0 |
| 39300-45-3 | Dinocap | 1.0 | | [1-[2-(2,4-Dichlorophenyl)-4-propyl- 1,3-dioxolan-2-yl]-methyl-1H-1,2,4,-triazole] | |
| 39515-41-8 | Fenpropathrin [2,2,3,3-Tetramethylcyclopropane carboxylic acid cyano(3- phenoxyphenyl)methyl ester] | 1.0 | 62476-59-9 | Acifluorfen, sodium salt | 1.0 |
| 40487-42-1 | Pendimethalin [N-(1-Ethylpropyl)-3,4-dimethyl-2,6- dinitrobenzenamine] | * | | [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-2- nitrobenzoic acid, sodium salt] | |
| 41198-08-7 | Profenofos [O-(4-Bromo-2-chlorophenyl)-O-ethyl-S- propyl phosphorothioate] | 1.0 | 63938-10-3 | Chlorotetrafluoroethane | 1.0 |
| 41766-75-0 | 3,3'-Dimethylbenzidine dihydrofluoride (o-Tolidinedihydrofluoride) | 0.1 | 64902-72-3 | Chlorsulfuron [2-Chloro-N-[[4-methoxy-6-methyl- 1,3,5-triazin-2-yl]amino] carbonyl] benzenesulfonamide] | 1.0 |
| 42874-03-3 | Oxyfluorfen | 1.0 | 64969-34-2 | 3,3'-Dichlorobenzidine sulfate | 0.1 |
| 43121-43-3 | Triadimefon [1-(4-Chlorophenoxy)-3,3-dimethyl-1-(1H- 1,2,4-triazol-1-yl)-2-butanone] | 1.0 | 66441-23-4 | Fenoxaprop ethyl [2-(4-((6-Chloro-2- benzoxazolylen)oxy)phenoxy)propanoic acid, ethyl ester] | 1.0 |
| 50471-44-8 | Vinclozolin [3-(3,5-Dichlorophenyl)-5-ethenyl-5-methyl- 2,4-oxazolidinedione] | 1.0 | 67485-29-4 | Hydramethylnon [Tetrahydro-5,5-dimethyl-2(1H)- pyrimidinone[3-[4-(trifluoromethyl)phenyl]- 1-[2-[4-(trifluoromethyl)phenyl]ethenyl]-2- propenylidene]hydrazone] | 1.0 |
| 51235-04-2 | Hexazinone | 1.0 | 68085-85-8 | Cyhalothrin | 1.0 |
| 51338-27-3 | Diclofop methyl [2-[4-(2,4-Dichlorophenoxy)- phenoxy]propanoic acid, methyl ester] | 1.0 | | [3-(2-Chloro-3,3,3-trifluoro-1-propenyl)-2,2- dimethylcyclopropanecarboxylic acid cyano(3-phenoxyphenyl) methyl ester] | |
| 51630-58-1 | Fenvalerate [4-Chloro-alpha-(1-methylethyl)- benzeneacetic acid cyano(3- phenoxyphenyl)methyl ester] | 1.0 | 68359-37-5 | Cyfluthrin [3-(2,2-Dichloroethenyl)-2,2- dimethylcyclopropanecarboxylic acid, cyano(4-fluoro-3-phenoxyphenyl) methyl ester] | 1.0 |
| 52645-53-1 | Permethrin [3-(2,2-Dichloroethenyl)-2,2- dimethylcyclopropane carboxylic acid, (3-phenoxyphenyl)methyl ester] | 1.0 | 69409-94-5 | Fluvalinate [N-[2-Chloro-4-(trifluoromethyl)phenyl]DL- valine(+)-cyano(3-phenoxyphenyl)methyl ester] | 1.0 |
| 53404-19-6 | Bromacil, lithium salt [2,4(1H,3H)-Pyrimidinedione, 5-bromo-6- methyl-3-(1-methylpropyl), lithium salt] | 1.0 | 69806-50-4 | Fluazifop butyl [2-[4-[[5-(Trifluoromethyl)-2- pyridinyl]oxy]phenoxy]propanoic acid, butyl ester] | 1.0 |
| 53404-37-8 | 2,4-D 2-ethyl-4-methylpentyl ester | 0.1 | 71751-41-2 | Abamectin [Avermectin B1] | 1.0 |
| 53404-60-7 | Dazomet, sodium salt [Tetrahydro-3,5-dimethyl-2H-1,3,5- thiadiazine-2-thione, ion(1-), sodium] | 1.0 | 72178-02-0 | Fomesafen [5-(2-Chloro-4-(trifluoromethyl)phenoxy)-N- methylsulfonyl]-2-nitrobenzamide] | 1.0 |
| 55290-64-7 | Dimethipin [2,3-Dihydro-5,6-dimethyl-1,4-dithiin 1,1,4,4-tetraoxide] | 1.0 | 72490-01-8 | Fenoxycarb [[2-(4-Phenoxy phenoxy)ethyl]carbamic acid ethyl ester] | 1.0 |

| CAS Number | Chemical Name | De Minimis Limit |
|-------------|--|------------------|
| 74051-80-2 | Sethoxydim [2-[1-(Ethoxyimino)butyl]-5-[2-(ethylthio)propyl]-3-hydroxyl-2-cyclohexen-1-one] | 1.0 |
| 76578-14-8 | Quizalofop-ethyl [2-[4-[(6-Chloro-2-quinoxalinyloxy]phenoxy]propanoic acid ethyl ester] | 1.0 |
| 77501-63-4 | Lactofen [Benzoic acid, 5-[2-Chloro-4-(trifluoromethyl)phenoxy]-2-nitro-, 2-ethoxy-1-methyl-2-oxoethyl ester] | 1.0 |
| 82657-04-3 | Bifenthrin | 1.0 |
| 88671-89-0 | Myclobutanil [.alpha.-Butyl-.alpha.-(4-chlorophenyl)-1H-1,2,4-triazole-1-propanenitrile] | 1.0 |
| 90454-18-5 | Dichloro-1,1,2-trifluoroethane | 1.0 |
| 90982-32-4 | Chlorimuron ethyl [Ethyl-2-[[[(4-chloro-6-methoxyprimidin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate] | 1.0 |
| 101200-48-0 | Tribenuron methyl [2-[[[(4-Methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoic acid methyl ester] | 1.0 |
| 111512-56-2 | 1,1-Dichloro-1,2,3,3,3-pentafluoropropane (HCFC-225eb) | 1.0 |
| 111984-09-9 | 3,3'-Dimethoxybenzidine hydrochloride (o-Dianisidine hydrochloride) | 0.1 |
| 127564-92-5 | Dichloropentafluoropropane | 1.0 |
| 128903-21-9 | 2,2-Dichloro-1,1,1,3,3-pentafluoropropane (HCFC-225aa) | 1.0 |
| 136013-79-1 | 1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea) | 1.0 |

c. Chemical Categories

Section 313 requires reporting on the EPCRA Section 313 chemical categories listed below, in addition to the specific EPCRA Section 313 chemicals listed above.

The metal compound categories listed below, unless otherwise specified, are defined as including any unique chemical substance that contains the named metal (e.g., antimony, nickel, etc.) as part of that chemical's structure.

EPCRA Section 313 chemical categories are subject to the 1% *de minimis* concentration unless the substance involved meets the definition of an OSHA carcinogen in which case the 0.1% *de minimis* concentration applies. The *de minimis* concentration for each category is provided in parentheses. The *de minimis* exemption is not available for PBT chemicals, therefore an asterisk appears where a *de minimis* limit would otherwise

appear. However, for purposes of the supplier notification requirement only, such limits are provided in Appendix D.

N010 Antimony Compounds (1.0)
Includes any unique chemical substance that contains antimony as part of that chemical's infrastructure.

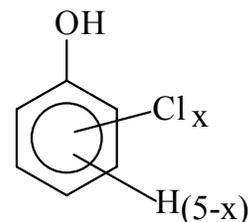
N020 Arsenic Compounds (inorganic compounds: 0.1; organic compounds: 1.0)
Includes any unique chemical substance that contains arsenic as part of that chemical's infrastructure.

N040 Barium Compounds (1.0)
Includes any unique chemical substance that contains barium as part of that chemical's infrastructure. This category does not include: Barium sulfate CAS Number 7727-43-7

N050 Beryllium Compounds (0.1)
Includes any unique chemical substance that contains beryllium as part of that chemical's infrastructure.

N078 Cadmium Compounds (0.1)
Includes any unique chemical substance that contains cadmium as part of that chemical's infrastructure.

N084 Chlorophenols (0.1)



Where $x = 1$ to 5

N090 Chromium Compounds
(except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). COPR is the solid waste remaining after aqueous extraction of oxidized chromite ore that has been combined with soda ash and kiln roasted at approximately 2,000 deg.F.)
(chromium VI compounds: 0.1; chromium III compounds: 1.0)
Includes any unique chemical substance that contains chromium as part of that chemical's infrastructure.

Table II

| N096 Cobalt Compounds (0.1) <i>Includes any unique chemical substance that contains cobalt as part of that chemical's infrastructure.</i> | | N150 Dioxin and Dioxin-Like Compounds (Manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical.) (*) This category includes only those chemicals listed below. [Note: When completing the Form R, Part II, Section 1.4, enter the distribution percent estimates for each of the dioxin and dioxin-like compounds chemical category members in the order they are listed here (i.e., 1-17).] | |
|---|---|---|--|
| N100 | Copper Compounds (1.0) <i>Includes any unique chemical substance that contains copper as part of that chemical's infrastructure. This category does not include copper phthalocyanine compounds that are substituted with only hydrogen, and/or chlorine, and/or bromine.</i> | | |
| N106 | Cyanide Compounds (1.0) <i>X⁺CN⁻ where X = H⁺ or any other group where a formal dissociation can be made. For example KCN or Ca(CN)₂.</i> | | |
| N120 | Diisocyanates (1.0) This category includes only those chemicals listed below. | | |
| 38661-72-2 | 1,3-Bis(methylisocyanate) - cyclohexane | 1 | 67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran |
| 10347-54-3 | 1,4-Bis(methylisocyanate)-cyclohexane | 2 | 55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran |
| 2556-36-7 | 1,4-Cyclohexane diisocyanate | 3 | 70648-26-9 1,2,3,4,7,8-Hexachlorod-benzofuran |
| 134190-37-7 | Diethyldiisocyanatobenzene | 4 | 57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran |
| 4128-73-8 | 4,4'-Diisocyanatodiphenyl ether | 5 | 72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran |
| 75790-87-3 | 2,4'-Diisocyanatodiphenyl sulfide | 6 | 60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran |
| 91-93-0 | 3,3'-Dimethoxybenzidine-4,4'-diisocyanate | 7 | 39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin |
| 91-97-4 | 3,3'-Dimethyl-4,4'-diphenylene diisocyanate | 8 | 57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin |
| 139-25-3 | 3,3'-Dimethyldiphenyl methane-4,4'-diisocyanate | 9 | 19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin |
| 822-06-0 | Hexamethylene-1,6-diisocyanate | 10 | 35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin |
| 4098-71-9 | Isophorone diisocyanate | 11 | 39001-02-0 1,2,3,4,6,7,8,9-Octachlorodibenzofuran |
| 75790-84-0 | 4-Methyldiphenylmethane-3,4-diisocyanate | 12 | 3268-87-9 1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin |
| 5124-30-1 | 1,1-Methylenebis(4-isocyanatocyclohexane) | 13 | 57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran |
| 101-68-8 | Methylenebis(phenylisocyanate) (MDI) | 14 | 57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran |
| 3173-72-6 | 1,5-Naphthalene diisocyanate | 15 | 40321-76-4 1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin |
| 123-61-5 | 1,3-Phenylene diisocyanate | 16 | 51207-31-9 2,3,7,8-Tetrachlorodibenzofuran |
| 104-49-4 | 1,4-Phenylene diisocyanate | 17 | 1746-01-6 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin |
| 9016-87-9 | Polymeric diphenylmethane diisocyanate | | |
| 16938-22-0 | 2,2,4-Trimethylhexamethylene diisocyanate | | |
| 15646-96-5 | 2,4,4-Trimethylhexamethylene diisocyanate | | |

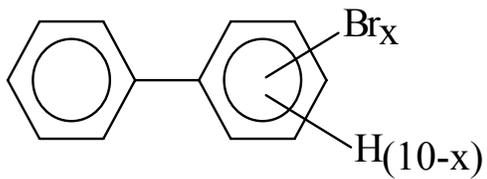
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------|--------------------|----------|----------------------|----------|----------------------|----------|----------------------|----------|--------------------|----------|------------------------|----------|----------------------|---------|----------------|----------|---------------------|----------|---------------------|---------|------------------------|----------|--------------------------|-----------|--------------------------|----------|--------------------|----------|--------------------|----------|--------------------|---------|---------------------------------|----------|------------------------|---------|----------------------|-----------|------------------|-----------|---------------|
| <p>N171 Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) (1.0) <i>Includes any unique chemical substance that contains an EBDC or an EBDC salt as part of that chemical's infrastructure.</i></p> | <p>N583 Polychlorinated alkanes (C₁₀ to C₁₃) (1.0, except for those members of the category that have an average chain length of 12 carbons and contain an average chlorine content of 60% by weight which are subject to the 0.1% <i>de minimis</i>)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N230 Certain Glycol Ethers (1.0)</p> <p>R-(OCH₂CH₂)_n-OR' where n = 1, 2, or 3 R = alkyl C7 or less; or R = phenyl or alkyl substituted phenyl; R' = H, or alkyl C7 or less; or OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.</p> | <p>C_xH_{2x+2-y}Cl_y where x = 10 to 13; y = 3 to 12; and the average chlorine content ranges from 40 — 70% with the limiting molecular formulas C₁₀H₁₉Cl₃ and C₁₃H₁₆Cl₁₂</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N420 Lead Compounds (*) <i>Includes any unique chemical substance that contains lead as part of that chemical's infrastructure.</i></p> | <p>N590 Polycyclic aromatic compounds (PACs) (*) This category includes the chemicals listed below.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N450 Manganese Compounds (1.0) <i>Includes any unique chemical substance that contains manganese as part of that chemical's infrastructure.</i></p> | <table border="0"> <tbody> <tr><td>56-55-3</td><td>Benzo(a)anthracene</td></tr> <tr><td>205-99-2</td><td>Benzo(b)fluoranthene</td></tr> <tr><td>205-82-3</td><td>Benzo(j)fluoranthene</td></tr> <tr><td>207-08-9</td><td>Benzo(k)fluoranthene</td></tr> <tr><td>206-44-0</td><td>Benzo(j,k)fluorene</td></tr> <tr><td>189-55-9</td><td>Benzo(r,s,t)pentaphene</td></tr> <tr><td>218-01-9</td><td>Benzo(a)phenanthrene</td></tr> <tr><td>50-32-8</td><td>Benzo(a)pyrene</td></tr> <tr><td>226-36-8</td><td>Dibenz(a,h)acridine</td></tr> <tr><td>224-42-0</td><td>Dibenz(a,j)acridine</td></tr> <tr><td>53-70-3</td><td>Dibenzo(a,h)anthracene</td></tr> <tr><td>194-59-2</td><td>7H-Dibenzo(c,g)carbazole</td></tr> <tr><td>5385-75-1</td><td>Dibenzo(a,e)fluoranthene</td></tr> <tr><td>192-65-4</td><td>Dibenzo(a,e)pyrene</td></tr> <tr><td>189-64-0</td><td>Dibenzo(a,h)pyrene</td></tr> <tr><td>191-30-0</td><td>Dibenzo(a,l)pyrene</td></tr> <tr><td>57-97-6</td><td>7,12-Dimethylbenz(a)-anthracene</td></tr> <tr><td>193-39-5</td><td>Indeno(1,2,3-cd)pyrene</td></tr> <tr><td>56-49-5</td><td>3-Methylcholanthrene</td></tr> <tr><td>3697-24-3</td><td>5-Methylchrysene</td></tr> <tr><td>5522-43-0</td><td>1-Nitropyrene</td></tr> </tbody> </table> | 56-55-3 | Benzo(a)anthracene | 205-99-2 | Benzo(b)fluoranthene | 205-82-3 | Benzo(j)fluoranthene | 207-08-9 | Benzo(k)fluoranthene | 206-44-0 | Benzo(j,k)fluorene | 189-55-9 | Benzo(r,s,t)pentaphene | 218-01-9 | Benzo(a)phenanthrene | 50-32-8 | Benzo(a)pyrene | 226-36-8 | Dibenz(a,h)acridine | 224-42-0 | Dibenz(a,j)acridine | 53-70-3 | Dibenzo(a,h)anthracene | 194-59-2 | 7H-Dibenzo(c,g)carbazole | 5385-75-1 | Dibenzo(a,e)fluoranthene | 192-65-4 | Dibenzo(a,e)pyrene | 189-64-0 | Dibenzo(a,h)pyrene | 191-30-0 | Dibenzo(a,l)pyrene | 57-97-6 | 7,12-Dimethylbenz(a)-anthracene | 193-39-5 | Indeno(1,2,3-cd)pyrene | 56-49-5 | 3-Methylcholanthrene | 3697-24-3 | 5-Methylchrysene | 5522-43-0 | 1-Nitropyrene |
| 56-55-3 | Benzo(a)anthracene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 205-99-2 | Benzo(b)fluoranthene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 205-82-3 | Benzo(j)fluoranthene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 207-08-9 | Benzo(k)fluoranthene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 206-44-0 | Benzo(j,k)fluorene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 189-55-9 | Benzo(r,s,t)pentaphene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 218-01-9 | Benzo(a)phenanthrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50-32-8 | Benzo(a)pyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 226-36-8 | Dibenz(a,h)acridine | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 224-42-0 | Dibenz(a,j)acridine | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 53-70-3 | Dibenzo(a,h)anthracene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 194-59-2 | 7H-Dibenzo(c,g)carbazole | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5385-75-1 | Dibenzo(a,e)fluoranthene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 192-65-4 | Dibenzo(a,e)pyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 189-64-0 | Dibenzo(a,h)pyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 191-30-0 | Dibenzo(a,l)pyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 57-97-6 | 7,12-Dimethylbenz(a)-anthracene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 56-49-5 | 3-Methylcholanthrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3697-24-3 | 5-Methylchrysene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5522-43-0 | 1-Nitropyrene | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N458 Mercury Compounds (*) <i>Includes any unique chemical substance that contains mercury as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N495 Nickel Compounds (0.1) <i>Includes any unique chemical substance that contains nickel as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N503 Nicotine and salts (1.0) <i>Includes any unique chemical substance that contains nicotine or a nicotine salt as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution) (1.0)</p> | <p>N725 Selenium Compounds (1.0) <i>Includes any unique chemical substance that contains selenium as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>N575 Polybrominated Biphenyls (PBBs) (0.1)</p> | <p>N740 Silver Compounds (1.0) <i>Includes any unique chemical substance that contains silver as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  <p style="text-align: center;">Where x = 1 to 10</p> | <p>N746 Strychnine and salts (1.0) <i>Includes any unique chemical substance that contains strychnine or a strychnine salt as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p>N760 Thallium Compounds (1.0) <i>Includes any unique chemical substance that contains thallium as part of that chemical's infrastructure.</i></p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Table II

N770 Vanadium Compounds (1.0)

Includes any unique chemical substance that contains vanadium as part of that chemical's infrastructure

N874 Warfarin and salts (1.0)

Includes any unique chemical substance that contains warfarin or a warfarin salt as part of that chemical's infrastructure.

N982 Zinc Compounds (1.0)

Includes any unique chemical substance that contains zinc as part of that chemical's infrastructure.

Table III. State Abbreviations

| | | | |
|----------------------|----|---------------------------|----|
| Alabama | AL | Montana | MT |
| Alaska | AK | Nebraska | NE |
| American Samoa | AS | Nevada | NV |
| Arizona | AZ | New Hampshire | NH |
| Arkansas | AR | New Jersey | NJ |
| California | CA | New Mexico | NM |
| Colorado | CO | New York | NY |
| Connecticut | CT | North Carolina | NC |
| Delaware | DE | North Dakota | ND |
| District of Columbia | DC | Northern Marianas Islands | MP |
| Florida | FL | Ohio | OH |
| Georgia | GA | Oklahoma | OK |
| Guam | GU | Oregon | OR |
| Hawaii | HI | Pennsylvania | PA |
| Idaho | ID | Puerto Rico | PR |
| Illinois | IL | Rhode Island | RI |
| Indiana | IN | South Carolina | SC |
| Iowa | IA | South Dakota | SD |
| Kansas | KS | Tennessee | TN |
| Kentucky | KY | Texas | TX |
| Louisiana | LA | Utah | UT |
| Maine | ME | Vermont | VT |
| Marshall Islands | MH | Virginia | VA |
| Maryland | MD | Virgin Islands | VI |
| Massachusetts | MA | Washington | WA |
| Michigan | MI | West Virginia | WV |
| Minnesota | MN | Wisconsin | WI |
| Mississippi | MS | Wyoming | WY |
| Missouri | MO | | |

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Table IV. Federal Information Processing Standards (FIPS) Codes

| | | | | | |
|----|-----------------------------|----|-----------------------------------|----|-------------------------------------|
| AA | Aruba | CE | Sri Lanka | FS | French Southern and Antarctic Lands |
| AC | Antigua and Barbuda | CF | Congo (Brazzaville) | GA | The Gambia |
| AE | United Arab Emirates | CG | Congo (Kinshasa) | GB | Gabon |
| AF | Afghanistan | CH | China | GG | Georgia |
| AG | Algeria | CI | Chile | GH | Ghana |
| AJ | Azerbaijan | CJ | Cayman Islands | GI | Gibraltar |
| AL | Albania | CK | Cocos (Keeling) Islands | GJ | Grenada |
| AM | Armenia | CM | Cameroon | GK | Guernsey |
| AN | Andorra | CN | Comoros | GL | Greenland |
| AO | Angola | CO | Colombia | GM | Germany |
| AR | Argentina | CR | Coral Sea Islands | GO | Glorioso Islands |
| AS | Australia | CS | Costa Rica | GP | Guadeloupe |
| AT | Ashmore and Cartier Islands | CT | Central African Republic | GR | Greece |
| AU | Austria | CU | Cuba | GT | Guatemala |
| AV | Anguilla | CV | Cape Verde | GV | Guinea |
| AY | Antarctica | CW | Cook Islands | GY | Guyana |
| BA | Bahrain | CY | Cyprus | GZ | Gaza Strip |
| BB | Barbados | DA | Denmark | HA | Haiti |
| BC | Botswana | DJ | Djibouti | HK | Hong Kong |
| BD | Bermuda | DO | Dominica | HM | Heard Island and McDonald Islands |
| BE | Belgium | DR | Dominican Republic | HO | Honduras |
| BF | The Bahamas | EC | Ecuador | HR | Croatia |
| BG | Bangladesh | EG | Egypt | HU | Hungary |
| BH | Belize | EI | Ireland | IC | Iceland |
| BK | Bosnia and Herzegovina | EK | Equatorial Guinea | ID | Indonesia |
| BL | Bolivia | EN | Estonia | IM | Isle of Man |
| BM | Burma | ER | Eritrea | IN | India |
| BN | Benin | ES | El Salvador | IO | British Indian Ocean Territory |
| BO | Belarus | ET | Ethiopia | IP | Clipperton Island |
| BP | Solomon Islands | EU | Europa Island | IR | Iran |
| BR | Brazil | EZ | Czech Republic | IS | Israel |
| BS | Bassas da India | FG | French Guiana | IT | Italy |
| BT | Bhutan | FI | Finland | IV | Cote D'Ivoire |
| BU | Bulgaria | FJ | Fiji | IZ | Iraq |
| BV | Bouvet Island | FK | Falkland Islands (Islas Malvinas) | JA | Japan |
| BX | Brunei | FO | Faroe Islands | JE | Jersey |
| BY | Burundi | FP | French Polynesia | JM | Jamaica |
| CA | Canada | FR | France | JN | Jan Mayen |
| CB | Cambodia | | | JO | Jordan |
| CD | Chad | | | | |

Table IV

| | | | | | |
|----|------------------------|----|----------------------------|----|--|
| JU | Juan de Nova Island | NH | Vanuatu | SV | Svalbard |
| KE | Kenya | NI | Nigeria | SW | Sweden |
| KG | Kyrgyzstan | NL | Netherlands | SX | South Georgia and South Sandwich Islands |
| KN | North Korea | NO | Norway | SY | Syria |
| KQ | Kingman Reef | NP | Nepal | SZ | Switzerland |
| KR | Kiribati | NR | Nauru | TD | Trinidad and Tobago |
| KS | South Korea | NS | Suriname | TE | Tromelin Island |
| KT | Christmas Island | NT | Netherlands Antilles | TH | Thailand |
| KU | Kuwait | NU | Nicaragua | TI | Tajikistan |
| KZ | Kazakhstan | NZ | New Zealand | TK | Turks and Caicos Islands |
| LA | Laos | PA | Paraguay | TL | Tokelau |
| LE | Lebanon | PC | Pitcairn Islands | TN | Tonga |
| LG | Latvia | PE | Peru | TO | Togo |
| LH | Lithuania | PF | Paracel Islands | TP | Sao Tome and Principe |
| LI | Liberia | PG | Spratly Islands | TS | Tunisia |
| LO | Slovakia | PK | Pakistan | TT | East Timor |
| LS | Liechtenstein | PL | Poland | TU | Turkey |
| LT | Lesotho | PM | Panama | TV | Tuvalu |
| LU | Luxembourg | PO | Portugal | TW | Taiwan |
| LY | Libya | PP | Papua New Guinea | TX | Turkmenistan |
| MA | Madagascar | PS | Palau | TZ | Tanzania |
| MB | Martinique | PU | Guinea-Bissau | UG | Uganda |
| MC | Macau | QA | Qatar | UK | United Kingdom |
| MD | Moldova | RE | Reunion | UP | Ukraine |
| MF | Mayotte | RO | Romania | UV | Burkina Faso |
| MG | Mongolia | RP | Philippines | UY | Uruguay |
| MH | Montserrat | RS | Russia | UZ | Uzbekistan |
| MI | Malawi | RW | Rwanda | VC | St. Vincent and the Grenadines |
| MK | Macedonia | SA | Saudi Arabia | VE | Venezuela |
| ML | Mali | SB | St. Pierre and Miquelon | VI | British Virgin Islands |
| MN | Monaco | SC | St. Kitts and Nevis | VM | Vietnam |
| MO | Morocco | SE | Seychelles | VT | Vatican City |
| MP | Mauritius | SF | South Africa | WA | Namibia |
| MR | Mauritania | SG | Senegal | WE | West Bank |
| MT | Malta | SH | St. Helena | WF | Wallis and Futuna |
| MU | Oman | SI | Slovenia | WI | Western Sahara |
| MV | Maldives | SL | Sierra Leone | WS | Western Samoa |
| MX | Mexico | SM | San Marino | WZ | Swaziland |
| MY | Malaysia | SN | Singapore | | |
| MZ | Mozambique | SO | Somalia | | |
| NC | New Caledonia | SP | Spain | | |
| NE | Niue | ST | St. Lucia | | |
| NF | Norfolk Island | SU | Sudan | | |
| NG | Niger | | | | |

| | |
|----|------------|
| YI | Yugoslavia |
| YM | Yemen |
| ZA | Zambia |
| ZI | Zimbabwe |

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Appendix A. Federal Facility Reporting Information

Special Instructions for TRI Federal Facility Reporting

Why Do Federal Facilities Need to Report?

Executive Order 13148, Greening the Government Through Leadership in Environmental Management, requires federal agencies to comply with the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) and the Pollution Prevention Act of 1990 (PPA). Federal facilities have been subject to EPCRA section 313 and PPA since reporting year 1994. TRI submissions are due to EPA on July 1 of the year following each reporting (calendar) year.

Reporting by the federal facility does not alter the reporting obligation of on-site contractors. "Nothing in this order alters the obligations under EPCRA, PPA, and CAA independent of this order for Government-owned, contractor-operated facilities and Government corporations owning or operating facilities or subjects such facilities to EPCRA, PPA, or CAA if they are otherwise excluded. However, each agency shall include the releases and other waste management of chemicals for all such facilities to meet the agency's reporting responsibilities under section 501 of this order." Section 902(c).

Identifying Federal Facility Reports

Federal facility reports are identified as federal by several indicators on the form. The facility name and parent company name are critical indicators and must be reported as described below. Another critical indicator is the federal facility report box, Part I, 4.2c. Federal facilities only should check this box to indicate that the report is from a federal agency for a federal facility; federal facilities should not check the GOCO box, (Part I, Section 4.2d of the Form R). Contractors located at federal facilities (GOCOs) should check the GOCO box (Part I, Section 4.2d of the Form R); they should not check the box 4.2c. Facilities should also complete the partial or complete facility blocks (Form R page 2, block 4.2a and 4.2b) as appropriate. If you are a federal facility reporting for the first time, you should write "new" in the TRI Facility ID (TRIFID) box, even if a contractor has reported for your facility in the past. The contractor will retain the original TRIFID. You will be assigned a new TRIFID the first time you report.

The "Double Counting" Problem

As structured, the law and the executive order require both regulated industries and the federal government to report TRI data, sometimes for the same site. In order to prevent duplicate data in the TRI database, which could result in "double counting" data for some chemicals and locations, EPA must be able to identify and distinguish the "Government Owned Contractor Operated" (GOCO) reports submitted by the federal contractor from the federal facility reports which contain data for the same site. To accomplish this, federal facility reports should be accompanied by either 1) exact copies (paper or electronic) of all contractor TRI reports, including when the totals reported by the federal facility are greater than that reported by the contractor(s), or 2) a cover letter which includes a list of the facility contractors which submit TRI reports to EPA, identifying each contractor by name, TRI technical contact, and TRI facility name and address. Additionally, federal facilities should check Form R, Part I, Section 4.2c, while contractors at federal facilities should check Form R, Part I, Section 4.2d.

Magnetic Media Reporting

EPA encourages all federal facilities and GOCO facilities to report using either EPA's Magnetic Media reporting software, or one of the commercially available packages. If the GOCO submits its reports on magnetic media to EPA and to the federal facility, the federal facility may submit magnetic media copies of their GOCO TRI reports to EPA provided that those reports account for all subject activities at the facility. Magnetic media reports must be accompanied by a cover letter which includes:

- " Required Form R certification statement;
- " List of the chemicals reported on the federal facility's disk; and
- " List that identifies the contractor(s) [if any] by name and by TRIFID number if they have an assigned TRIFID number, and the chemicals they reported (which are on the contractors' attachment disk(s))

How to Report Your Facility Name

Facility name is a critical data element. It is used by EPA to create the TRI facility ID number, which is a unique number designed to identify a facility site. The facility name and TRIFID number are used by all TRI data users to link data from a single site across multiple reporting years. A federal facility is assigned a new TRIFID number when the federal report is

entered into the Toxics Release Inventory system for the first time. This TRIFID number, generated when the first report is entered into the Toxics Release Inventory System, will be included in future reporting packages sent to the federal facility, and should be used by the federal facility in all future reports.

Federal facilities should report their facility name on page 1 of the Form Rs (Section 4.1), as shown in the following example:

U.S. DOE Savannah River Site

It is very important that the agency name appear first, followed by the specific plant or site name.

Federal contractors at GOCO facilities should report their names as shown in the following example:

U.S. DOE Savannah River Site — Westinghouse Operations.

How to Report Your Standard Industrial Classification (SIC) Code

Federal facilities should report the SIC code which most closely represents the activities taking place at the site. Additional guidance on determining your SIC code is provided in the Forms and Instructions booklet. The table on the next page contains Public Administration SIC codes 91–97 covering executive, legislative, judicial, administrative and regulatory activities of the Federal government. Government-owned and operated business establishments are classified in major SIC groups 01–89 according to the activity in which they are engaged. For example, a Veterans Hospital would be classified in Group 806 — Hospitals.

How to Report Your “Parent Company” Name

Federal facilities should report their parent company name on page 2 of the Form Rs (Section 5.1) by reporting their complete Department or Agency name, as shown in the following example:

U.S. Department of Energy

Block 5.2, Parent Company’s Dun & Bradstreet Number,

should be marked NA.

Federal contractors at GOCO facilities should not report a federal department or agency name as their parent company. A federal name in the parent company name field will classify the report as federal, and the GOCO may be identified as a non-reporter.

How to Revise Your Data After It Has Been Submitted

Any TRI Form R submitter may voluntarily revise their submission if they find errors after their reports have been sent to EPA. If the revision is to a hardcopy report, the facility should photocopy the original form, you should use a blue or black pen to mark out the incorrect value and write in the corrected value. The revised report should be submitted to EPA, with an “X” in the revision block on page 1 of the Form R. If the revision is to a diskette, a new diskette should be submitted, containing the data only for the revised submission, not all the chemicals originally reported. If a federal facility receives a copy of a revision from a contractor located at the federal facility, the facility should revise the federal report, and submit the revised report to EPA and the appropriate state along with an exact copy of the contractor’s revision. The cover letter from the federal facility should indicate that its submission is a revision.

National Security Data

DO NOT SUBMIT NATIONAL SECURITY DATA TO THE TRI DATA PROCESSING CENTER. National security data are handled through a separate process. Facilities should consult the Guidance for Implementing Executive Order 12856 documents (this guidance for Executive Order 12856, which was superseded by Executive Order 13148, still applies for national security issues) or call the EPCRA Call Center if their Form R submission involves a national security data claim.

Who Should Sign Federal Form R Reports?

Federal Form R reports should be signed by the senior federal employee on-site. If no federal employee is on-site, federal Form R reports must be signed by the senior federal employee with management responsibility for the site. Federal Form R reports should be signed by a federal employee. Contractor employee signatures are not considered valid on federal reports.

More Help is Available!

Federal facilities may call EPA's EPCRA Call Center at 800 424-9346, 703 412-9810, TDD 800 553-7672 to ask specific questions concerning how to submit their Form R reports.

Standard Industrial Classification Codes 91–97**Division J — Public Administration****91 Executive, Legislative, and General Government, Except Finance**

9111 Executive Offices
 9121 Legislative Bodies
 9131 Executive and Legislative Offices Combined
 9199 General Government, Not Elsewhere Classified

92 Justice, Public Order, and Safety

9211 Courts
 9221 Police Protection
 9222 Legal Counsel and Prosecution
 9223 Correctional Institutions
 9224 Fire Protection
 9229 Public Order and Safety, Not Elsewhere Classified

93 Public Finance, Taxation, and Monetary Policy

9311 Public Finance, Taxation, and Monetary Policy

94 Administration of Human Resource Programs

9411 Administration of Educational Programs
 9431 Administration of Public Health Programs
 9441 Administration of Social, Human Resource and Income Maintenance Programs
 9451 Administration of Veterans' Affairs, Except Health and Insurance

95 Administration of Environmental Quality and Housing Programs

9511 Air and Water Resource and Solid Waste Management
 9512 Land, Mineral, Wildlife, and Forest Conservation
 9531 Administration of Housing Programs
 9532 Administration of Urban Planning and Community and Rural Development

96 Administration of Economic Programs

9611 Administration of General Economic Programs
 9621 Regulation and Administration of Transportation Programs
 9631 Regulation and Administration of Communications, Electric, Gas, and Other Utilities
 9641 Regulation of Agricultural Marketing and Commodities
 9651 Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors
 9661 Space Research and Technology

97 National Security and International Affairs

9711 National Security
 9721 International Affairs

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Appendix B. Reporting Codes For EPA Form R and Instructions for Reporting Metals

Form R Part II

Section 1.1. CAS Number

EPCRA Section 313 Chemical Category Codes

| | |
|------|--|
| N010 | Antimony compounds |
| N020 | Arsenic compounds |
| N040 | Barium compounds |
| N050 | Beryllium compounds |
| N078 | Cadmium compounds |
| N084 | Chlorophenols |
| N090 | Chromium compounds |
| N096 | Cobalt compounds |
| N100 | Copper compounds |
| N106 | Cyanide compounds |
| N120 | Diisocyanates |
| N150 | Dioxin and dioxin-like compounds |
| N171 | Ethylenebisdithiocarbamic acid, salts and esters (EBDCs) |
| N230 | Certain glycol ethers |
| N420 | Lead compounds |
| N450 | Manganese compounds |
| N458 | Mercury compounds |
| N495 | Nickel compounds |
| N503 | Nicotine and salts |
| N511 | Nitrate compounds |
| N575 | Polybrominated biphenyls (PBBs) |
| N583 | Polychlorinated alkanes |
| N590 | Polycyclic aromatic compounds |
| N725 | Selenium compounds |
| N740 | Silver compounds |
| N746 | Strychnine and salts |
| N760 | Thallium compounds |
| N770 | Vanadium compounds |
| N874 | Warfarin and salts |
| N982 | Zinc compounds |

Section 4. Maximum Amount of the Toxic Chemical On-Site at Any Time During the Calendar Year

Weight Range in Pounds

| <u>Range Code</u> | <u>From...</u> | <u>To....</u> |
|-------------------|----------------|---------------------|
| 01 | 0 | 99 |
| 02 | 100 | 999 |
| 03 | 1,000 | 9,999 |
| 04 | 10,000 | 99,999 |
| 05 | 100,000 | 999,999 |
| 06 | 1,000,000 | 9,999,999 |
| 07 | 10,000,000 | 49,999,999 |
| 08 | 50,000,000 | 99,999,999 |
| 09 | 100,000,000 | 499,999,999 |
| 10 | 500,000,000 | 999,999,999 |
| 11 | 1 billion | more than 1 billion |

Section 5. Quantity of the Non-PBT Chemical Entering Each Environmental Medium On-site and Section 6. Transfers of the Toxic Chemical in Wastes to Off-Site Locations

Total Release or Transfer

| <u>Code</u> | <u>Range (lbs)</u> |
|-------------|--------------------|
| A | 1-10 |
| B | 11-499 |
| C | 500-999 |

Basis of Estimate

- M: Estimate is based on monitoring data or measurements for the EPCRA section 313 chemical as transferred to an off-site facility.
- C: Estimate is based on mass balance calculations, such as calculation of the amount of the EPCRA section 313 chemical in waste streams entering and leaving process equipment.
- E: Estimate is based on published emission factors, such as those relating release quantity to through-put or equipment type (e.g., air emission factors).
- O: Estimate is based on other approaches such as engineering calculations (e.g., estimating volatilization using published mathematical formulas) or best

engineering judgment. This would include applying an estimated removal efficiency to a treatment, even if the composition of the waste before treatment was fully identified through monitoring data.

Section 6. Transfers of the Non-PBT Chemical in Wastes to Off-Site Locations

Type of Waste Disposal/Treatment/Energy Recovery/Recycling

| | |
|-----|--|
| M10 | Storage Only |
| M20 | Solvents/Organics Recovery |
| M24 | Metals Recovery |
| M26 | Other Reuse or Recovery |
| M28 | Acid Regeneration |
| M40 | Solidification/Stabilization |
| M41 | Solidification/Stabilization-Metals and Metal Category Compounds only |
| M50 | Incineration/Thermal Treatment |
| M54 | Incineration/Insignificant Fuel Value |
| M56 | Energy Recovery |
| M61 | Wastewater Treatment (Excluding POTW) |
| M62 | Wastewater Treatment (Excluding POTW) — Metals and Metal Category Compounds only |
| M63 | Surface Impoundment |
| M64 | Other Landfills |
| M65 | RCRA Subtitle C Landfills |
| M69 | Other Waste Treatment |
| M71 | Underground Injection |
| M73 | Land Treatment |
| M79 | Other Land Disposal |
| M90 | Other Off-Site Management |
| M92 | Transfer to Waste Broker — Energy Recovery |
| M93 | Transfer to Waste Broker — Recycling |
| M94 | Transfer to Waste Broker — Disposal |
| M95 | Transfer to Waste Broker — Waste Treatment |
| M99 | Unknown |

Section 7A. On-Site Waste Treatment Methods and Efficiency

General Waste Stream

| | |
|---|--|
| A | Gaseous (gases, vapors, airborne particulates) |
| W | Wastewater (aqueous waste) |
| L | Liquid waste streams (non-aqueous waste) |
| S | Solid waste streams (including sludges and slurries) |

Waste Treatment Methods

Air Emissions Treatment

| | |
|-----|------------------------------|
| A01 | Flare |
| A02 | Condenser |
| A03 | Scrubber |
| A04 | Absorber |
| A05 | Electrostatic Precipitator |
| A06 | Mechanical Separation |
| A07 | Other Air Emission Treatment |

Biological Treatment

| | |
|-----|------------------------------------|
| B11 | Biological Treatment — Aerobic |
| B21 | Biological Treatment — Anaerobic |
| B31 | Biological Treatment — Facultative |
| B99 | Biological Treatment — Other |

Chemical Treatment

| | |
|-----|--|
| C01 | Chemical Precipitation — Lime or Sodium Hydroxide |
| C02 | Chemical Precipitation — Sulfide |
| C09 | Chemical Precipitation — Other |
| C11 | Neutralization |
| C21 | Chromium Reduction |
| C31 | Complexed Metals Treatment (other than pH Adjustment) |
| C41 | Cyanide Oxidation — Alkaline Chlorination |
| C42 | Cyanide Oxidation — Electrochemical |
| C43 | Cyanide Oxidation — Other |
| C44 | General Oxidation (Including Disinfection)— Chlorination |
| C45 | General Oxidation (Including Disinfection) — Ozonation |
| C46 | General Oxidation (Including Disinfection) — Other |
| C99 | Other Chemical Treatment |

Incineration/Thermal Treatment

| | |
|-----|--|
| F01 | Liquid Injection |
| F11 | Rotary Kiln with Liquid Injection Unit |
| F19 | Other Rotary Kiln |
| F31 | Two Stage |
| F41 | Fixed Hearth |
| F42 | Multiple Hearth |
| F51 | Fluidized Bed |
| F61 | Infra-Red |
| F71 | Fume/Vapor |
| F81 | Pyrolytic Destructor |
| F82 | Wet Air Oxidation |
| F83 | Thermal Drying/Dewatering |
| F99 | Other Incineration/Thermal Treatment |

Physical Treatment

| | |
|-----|---|
| P01 | Equalization |
| P09 | Other Blending |
| P11 | Settling/Clarification |
| P12 | Filtration |
| P13 | Sludge Dewatering (Non-thermal) |
| P14 | Air Flotation |
| P15 | Oil Skimming |
| P16 | Emulsion Breaking — Thermal |
| P17 | Emulsion Breaking — Chemical |
| P18 | Emulsion Breaking — Other |
| P19 | Other Liquid Phase Separation |
| P21 | Adsorption — Carbon |
| P22 | Adsorption — Ion Exchange (Other than for recovery/reuse) |
| P23 | Adsorption — Resin |
| P29 | Adsorption — Other |
| P31 | Reverse Osmosis (Other than for recovery/reuse) |
| P41 | Stripping — Air |
| P42 | Stripping — Steam |
| P49 | Stripping — Other |
| P51 | Acid Leaching (Other than for recovery/reuse) |
| P61 | Solvent Extraction (Other than for recovery/reuse) |
| P99 | Other Physical Treatment |

Solidification/Stabilization

| | |
|-----|--|
| G01 | Cement Processes (Including Silicates) |
| G09 | Other Pozzolonic Processes (Including Silicates) |
| G11 | Asphaltic Processes |
| G21 | Thermoplastic Techniques |
| G99 | Other Solidification Processes |

Range of Influent Concentration

- 1 = Greater than 10,000 parts per million (1 percent)
- 2 = 100 parts per million (0.01 percent) to 10,000 parts per million (1 percent)
- 3 = 1 part per million (0.0001 percent) to 100 parts per million (0.01 percent)
- 4 = 1 part per billion to 1 part per million
- 5 = Less than 1 part per billion

[Note: Parts per million (ppm) is milligrams/kilogram (mass/mass) for solids and liquids; cubic centimeters/cubic meter (volume/volume) for gases; milligrams/liter for solutions or dispersions of the chemical in water; and milligrams of chemical/kilogram of air for particulates in air. If you have particulate concentrations (at standard temperature and pressure) as grains/cubic foot of air, multiply by 1766.6 to convert to parts per million; if in milligrams/cubic meters, multiply by 0.773 to

obtain parts per million. Factors are for standard conditions of 0°C (32°F) and 760 mmHg atmospheric pressure.]

Section 7B. On-Site Energy Recovery Processes

| | |
|-----|-------------------------------|
| U01 | Industrial Kiln |
| U02 | Industrial Furnace |
| U03 | Industrial Boiler |
| U09 | Other Energy Recovery Methods |

Section 7C. On-Site Recycling Processes

| | |
|-----|---|
| R11 | Solvents/Organics Recovery — Batch Still Distillation |
| R12 | Solvents/Organics Recovery — Thin-Film Evaporation |
| R13 | Solvents/Organics Recovery — Fractionation |
| R14 | Solvents/Organics Recovery — Solvent Extraction |
| R19 | Solvents/Organics Recovery — Other |
| R21 | Metals Recovery — Electrolytic |
| R22 | Metals Recovery — Ion Exchange |
| R23 | Metals Recovery — Acid Leaching |
| R24 | Metals Recovery — Reverse Osmosis |
| R26 | Metals Recovery — Solvent Extraction |
| R27 | Metals Recovery — High Temperature |
| R28 | Metals Recovery — Retorting |
| R29 | Metals Recovery — Secondary Smelting |
| R30 | Metals Recovery — Other |
| R40 | Acid Regeneration |
| R99 | Other Reuse or Recovery |

Section 8.10. Source Reduction Activity Codes**Good Operating Practices**

| | |
|-----|---|
| W13 | Improved maintenance scheduling, record keeping, or procedures |
| W14 | Changed production schedule to minimize equipment and feedstock changeovers |
| W19 | Other changes in operating practices |

Inventory Control

| | |
|-----|---|
| W21 | Instituted procedures to ensure that materials do not stay in inventory beyond shelf-life |
| W22 | Began to test outdated material — continue to use if still effective |
| W23 | Eliminated shelf-life requirements for stable materials |
| W24 | Instituted better labeling procedures |
| W25 | Instituted clearinghouse to exchange materials that |

- would otherwise be discarded
 W29 Other changes in inventory control

Spill and Leak Prevention

- W31 Improved storage or stacking procedures
 W32 Improved procedures for loading, unloading, and transfer operations
 W33 Installed overflow alarms or automatic shut-off valves
 W35 Installed vapor recovery systems
 W36 Implemented inspection or monitoring program of potential spill or leak sources
 W39 Other changes made in spill and leak prevention

Raw Material Modifications

- W41 Increased purity of raw materials
 W42 Substituted raw materials
 W49 Other raw material modifications made

Process Modifications

- W51 Instituted recirculation within a process
 W52 Modified equipment, layout, or piping
 W53 Use of a different process catalyst
 W54 Instituted better controls on operating bulk containers to minimize discarding of empty containers
 W55 Changed from small volume containers to bulk containers to minimize discarding of empty containers
 W58 Other process modifications

Cleaning and Degreasing

- W59 Modified stripping/cleaning equipment
 W60 Changed to mechanical stripping/cleaning devices (from solvents or other materials)
 W61 Changed to aqueous cleaners (from solvents or other materials)
 W63 Modified containment procedures for cleaning units
 W64 Improved draining procedures
 W65 Redesigned parts racks to reduce drag out
 W66 Modified or installed rinse systems
 W67 Improved rinse equipment design
 W68 Improved rinse equipment operation
 W71 Other cleaning and degreasing modifications

Surface Preparation and Finishing

- W72 Modified spray systems or equipment
 W73 Substituted coating materials used
 W74 Improved application techniques
 W75 Changed from spray to other system
 W78 Other surface preparation and finishing modifications

Product Modifications

- W81 Changed product specifications
 W82 Modified design or composition of products
 W83 Modified packaging
 W89 Other product modifications

Section 8.10. Methods Used to Identify Source Reduction Activities

For each source reduction activity, enter up to three of the following codes that correspond to the method(s) which contributed most to the decision to implement that activity.

- T01 Internal Pollution Prevention Opportunity Audit(s)
 T02 External Pollution Prevention Opportunity Audit(s)
 T03 Materials Balance Audits
 T04 Participative Team Management
 T05 Employee Recommendation (independent of a formal company program)
 T06 Employee Recommendation (under a formal company program)
 T07 State Government Technical Assistance Program
 T08 Federal Government Technical Assistance Program
 T09 Trade Association/Industry Technical Assistance Program
 T10 Vendor Assistance
 T11 Other

Reporting the Waste Management of Metals.

This appendix outlines how the *TRI-ME* 2002 reporting software restricts reporting for metals when the specific data element or waste management code is not applicable for a particular chemical. Below is a list of metals divided into four groups along with charts that help explain where quantities of these chemicals can and can not be reported on the Form R using *TRI-ME*. In addition, there are charts that explain restrictions on reporting waste management codes for the toxic chemicals in each of the four groups. This appendix only shows where reporting is restricted in *TRI-ME*, it does not indicate every situation where a metal should not be reported in a specific section of the form. For example, *TRI-ME* does not restrict the reporting of most individually-listed metal compounds as used for energy recovery (Sections 8.2 and 8.3) even though some of these chemicals do not have a heat value greater than 5000 British thermal units (Btu) and thus, can not be combusted for energy recovery. It is left to the facility to decide which of these toxic chemicals can be used for energy recovery. If you are not using *TRI-ME* this appendix can serve as a guide to help you understand where it is not appropriate to report certain quantities of toxic chemicals or waste management codes on your Form R.

| <u>Parent Metals:</u> | <u>Metal Compound Categories:</u> | <u>Metals with Qualifiers:</u> | <u>Individually-Listed Metal Compounds:</u> |
|-----------------------|-----------------------------------|------------------------------------|---|
| Antimony | Antimony Compounds | Aluminum (fume or dust) | Bis(tributyltin) oxide |
| Arsenic | Arsenic Compounds | Vanadium (except when in an alloy) | Triphenyltin hydroxide |
| Barium | Barium Compounds | Zinc (fume or dust) | Triphenyltin chloride |
| Beryllium | Beryllium Compounds | | Molybdenum trioxide |
| Cadmium | Cadmium Compounds | | Thorium dioxide |
| Chromium | Chromium Compounds ¹ | | Asbestos (friable) |
| Cobalt | Cobalt Compounds | | Aluminum oxide (fibrous forms) |
| Copper | Copper Compounds | | Tributyltin fluoride |
| Lead | Lead Compounds | | Tributyltin methacrylate |
| Manganese | Manganese Compounds | | Titanium tetrachloride |
| Mercury | Mercury Compounds | | Boron trifluoride |
| Nickel | Nickel Compounds | | Metiram |
| Selenium | Selenium Compounds | | Boron trichloride |
| Silver | Silver Compounds | | Zineb |
| Thallium | Thallium Compounds | | Maneb |
| | Vanadium Compounds | | Fenbutatin oxide |
| | Zinc Compounds | | Iron pentacarbonyl |
| | | | Ferbam |
| | | | C.I. Direct Brown 95 |
| | | | Osmium tetroxide |
| | | | Aluminum phosphide |
| | | | C.I. Direct Blue 218 |

¹ Except for chromite ore mined in the Transvaal Region of South Africa and the unreacted ore component of the chromite ore processing residue (COPR). COPR is the solid waste remaining after aqueous extraction of oxidized chromite ore that has been combined with soda ash and kiln roasted at approximately 2,000 deg.F.

Section 6.2. Transfers to Other Off Site Locations.

Any toxic chemical may be reported in Section 6.2, however, *TRI-ME* will not allow certain M codes to be used when reporting metals. The chart below indicates which M codes can be reported in Section 6.2 for the four groups of metals. Note that all disposal M codes other than M41 and M62 can be used for all toxic chemicals. Code M24 is only made available for the four groups of metals.

| Waste Management Code for Section 6.2 | Parent Metals | Metal Category Compounds | Metals with Qualifiers | Individually-listed Metal Compounds |
|--|---------------------|-------------------------------|---|-------------------------------------|
| M41 and M62 (disposal codes for metals only) | All | All | All | All |
| M56 and M92 (energy recovery codes) | None | None | None | All except Asbestos ² |
| M20 and M28 (recycling codes) | None | None | None | All |
| M24, M26 and M93 (recycling codes) | All | All | All | All |
| M40, M50, M54, (treatment codes) | None | None | All except Vanadium (except when contained in an alloy) | All |
| M61, M69, M95 (treatment codes) | Barium ³ | Barium Compounds ³ | Same as above | All |

Section 7A. On-site Waste Treatment Methods and Efficiency

TRI-ME allows any toxic chemical to be reported in Section 7A, however, it limits the treatment codes that can be reported based on the General Waste Stream Code selected. If a *TRI-ME* user selects General Waste Stream code "A - Gaseous", all Waste Treatment Codes are made available. However, if a user selects from the remaining three General Waste Stream Codes (W - Wastewater, L - Liquid waste streams, or S - Solid waste streams), the "Air Emissions Treatment" Waste Treatment Codes are not made available.

² Although *TRI-ME* does not restrict reporting of most individually-listed metal compounds as transferred off site for energy recovery, only chemicals with a heat value greater than 5000 British thermal units that are combusted in a device that is an industrial furnace or boiler (40 CFR Section 372.3) should be reported as used for energy recovery.

³ The toxic chemical category barium compounds (N040) does not include barium sulfate. Because barium sulfate is not a listed toxic chemical, the conversion in a waste stream of barium or a barium compound to barium sulfate is considered treatment for destruction (40 CFR Section 372.3).

Section 7B. On-site Energy Recovery Processes

The chart below indicates which energy recovery codes can be reported in *TRI-ME* in Section 7B for the four groups of metals.

| Energy Recovery Code for Section 7B | Parent Metals | Metal Category Compounds | Metals with Qualifiers | Individually-listed Metal Compounds |
|-------------------------------------|---------------|--------------------------|------------------------|-------------------------------------|
| U01, U02, U03, U09 | None | None | None | All except Asbestos ⁴ |

Section 7C. On-site Recycling Processes

Any chemical can be reported in Section 7C, however, certain waste management codes should not be reported for certain toxic chemicals. The chart below indicates which codes can be reported in Section 7C when using *TRI-ME*. Treatment code R99, which is not listed in this chart, can be reported for any toxic chemical.

| Recycling Code for Section 7C | Parent Metals | Metal Category Compounds | Metals with Qualifiers | Individually-listed Metal Compounds |
|--|---------------|--------------------------|------------------------|-------------------------------------|
| R21, R22, R23, R24, R26, R27, R28, R29, R30 (these codes are for metals only) | All | All | All | All |
| R12, R13, R14, R19, R40 | None | None | None | All |

Section 8. Source Reduction and Recycling Activities

The chart below indicates which metals can be reported in Sections 8.2, 8.3, 8.6 and 8.7 of the Form R when using *TRI-ME*. Note that all toxic chemicals can be reported in Sections 8.1, 8.4, 8.5 and 8.8.

| Waste Management Activity | Parent Metals | Metal Category Compounds | Metals with Qualifiers | Individually-listed Metal Compounds |
|--|---------------------------------|---|---|-------------------------------------|
| Quantity used for energy recovery on site and off site (Sections 8.2 and 8.3) | None | None | None | All except Asbestos ⁴ |
| Quantity treated for destruction on site and off site (Sections 8.6 and 8.7) | None except Barium ⁵ | None except Barium Compounds ⁵ | All except Vanadium (except when contained in an alloy) | All |

⁴ Although *TRI-ME* does not restrict reporting of most individually-listed metal compounds in Sections 7B, 8.2 or 8.3, only chemicals with a heat value greater than 5000 British thermal units that are combusted in a device that is an industrial furnace or boiler (40 CFR Section 372.3) should be reported in these sections.

⁵ The toxic chemical category barium compounds (N040) does not include barium sulfate. Because barium sulfate is not a listed toxic chemical, the conversion in a waste stream of barium or a barium compound to barium sulfate is considered treatment for destruction (40 CFR Section 372.3).

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Appendix C. Facility Data Profiles, and Common Errors in Completing Form R Reports and Form A Certifications

EPA wishes to ensure that facilities submit all required TRI chemical submissions in a timely manner so that the information may be included in its national database, annual public data release, and other information products. Moreover, EPA seeks to ensure that all submitted data is complete and accurate. This appendix provides an overview of Facility Data Profiles (FDPs), an important communication tool that EPA uses to ensure consistent, complete, and accurate submissions from reporting facilities. This appendix also provides specific guidance to avoid common errors in completing Form Rs and Form As, including errors in threshold determination, misapplication of exemptions, and overlooking activities involving a reportable chemical, any of which may result in mistaken non-reporting of a chemical.

A. Facility Data Profile (FDP)

Facility Data Profiles (FDPs) are made available by TRI Data Processing Center to a reporting facility in response to any submission the TRI Data Processing Center receives. A submission can include an original or revised Form R or Form A, or corrections included in a response to a previous FDP. The FDP serves two primary purposes. First, EPA wants to give the reporting facility the opportunity to confirm that the TRI Data Processing Center has entered its data correctly into EPA's national computer system – i.e. the TRI Data Processing Center “echoes back” the information that it has received. Second, if the TRI Data Processing Center identifies potential errors in the forms a facility has submitted, the FDP indicates what these errors are and requests that the facility provide EPA with corrections. If the data presented on a facility's FDP do not match those on the form(s) it submitted, or if the TRI Data Processing Center has identified errors in a facility's submissions, or if a facility discovers errors in its submitted data, the facility may use the FDP to make the needed corrections. The FDP does not serve as a means to withdraw a Form R and/or Form A. Withdrawal requests should be mailed to the TRI Data Processing Center. For additional information regarding withdrawal procedures, go to <www.epa.gov/tri>.

An FDP is comprised of the following sections:

- " **Instruction and Signature page.** This first page provides instructions for how to review and respond to the FDP. The bottom half of the page provides a certification statement to be signed by a facility owner/operator or senior management official.
- " **Summary of Non-Technical Data Changes (NDCs), Notices of Technical Errors (NOTEs) and Notices of Significant Errors (NOSEs).** FDPs identify three different types of errors: NDCs, NOTEs and NOSEs. NDCs and NOTEs are identified at the end of each chemical report. If you have no NDCs or NOTEs, this page will indicate so. There is one page that lists all significant errors (NOSEs) for your facility's submissions, organized by chemical submission. The FDP serves as a Formal Notice of Significant Error.

If you have no significant errors, this page will indicate so.

- " **Facility Information.** This section displays all facility specific data, inclusive of TRI Facility Identification, facility name, facility address, facility mailing address, relevant permits (e.g., RCRA, NPDES, and UIC), Standard Industrial Classification code (SIC), and other facility data. Errors related to facility information will be provided in this section.
- " **Facility Information (Establishment).** If an establishment reports separately from other establishments at the facility, this section provides subordinate facility data. Errors related to facility information will be provided in this section.
- " **Chemical Report Summary.** This section lists all chemicals reported by the facility for each reporting year affected by the FDP. For example, if the FDP is responding to five original chemical submissions for Reporting Year 1999 and revisions to one chemical for Reporting Year 1998, a list of all chemicals for both years will appear.
- " **Chemical Reports.** All recently processed Form R or Form A submission data (i.e., chemical specific data) are displayed here under the appropriate facility or subordinate facility names. The FDP displays facsimiles for chemical reports for recent submissions, revisions or responses to FDPs only. For example, if a facility originally reported five chemicals for Reporting Year 1998, and subsequently revises only one chemical submission, the facility will receive a FDP for Reporting Year 1998 with only the revised chemical included in the Chemical Reports section. Hence there may be fewer chemical reports than chemicals listed in the Chemical Summary section. If only facility level changes have occurred (i.e., Part I of the Form R or A), this section is not provided.

B. Levels of Errors Identified in FDPs: Notice of Non-Technical Data Change (NDC), Notice of Technical Errors (NOTE), Notice of Significant Errors (NOSE), Notice of Noncompliance (NON).

FDP Error Reporting. In addition to “echoing back” the information a facility has submitted, FDPs are used to identify potential errors, as well as indicate where the TRI Data Processing Center has made minor clerical corrections to submissions. As submission information is entered into EPA’s national database, a series of automated data quality checks are performed. The data quality checks are useful to correct such things as TRI Facility Identification, facility name, county spelling, as well as to perform validation checks to ensure consistency among data elements within a given Form R or Form A. These data quality checks, however, cannot detect whether release, transfer, or waste management quantities were calculated or entered accurately. Within a FDP notice, there may be up to three different types of errors identified.

First, a **Non-Technical Data Change (NDC)** notifies you of simple, clerical errors that EPA has corrected for you. It is not necessary to respond to a NDC. The TRI Data Processing Center will correct simple, clerical errors that are not technical or scientific — a “**non-technical data change.**” For example, if a facility transposes CAS numbers (e.g., the submitter lists 7623-00-0 for sodium nitrite instead of 7632-00-0), the TRI Data Processing Center will correct this clerical error and display the correct information on the FDP sent to the facility. If a facility lists a specific glycol ethers subcategory, the TRI Data Processing Center will replace this subcategory with the reportable name “certain glycol ethers.” The messages used on FDPs to report non-technical data changes are shown below at the end of this appendix under the heading “E. Messages used to report Notices of Technical Errors (NOTEs) and Non-technical Data Changes (NDCs).”

Second, a **Notice of Technical Error (NOTE)** highlights inconsistencies or miscalculations that may distort your facility’s information in EPA’s public data products or skew analyses. Incomplete addresses, no technical or public contact provided, missing or invalid SIC codes, or the use of range codes to report PBT chemical releases are all examples of technical errors. You should respond to NOTEs as soon as possible. These types of errors require that the reporting facility make corrections on their FDP (or provide the TRI Data Processing Center with a brief explanation why they do not believe that it is an error) or submit a revised Form R or Form A. Depending upon when your changes are received, there may or may not be sufficient time to incorporate them into our database in time for public data release. Technical errors do not prevent submissions from being entered into the data

management system, but indicate inconsistencies or miscalculations in the submitted form. These errors can distort public information products and skew any analyses if not corrected. The messages used on FDPs to report NOTEs are shown below at the end of this appendix under the heading “E. Messages used to report Notices of Technical Errors (NOTEs) and Non-technical Data Changes (NDCs).”

Third, more serious errors are classified as **Notices of Significant Errors (NOSE)**. The FDP contains the Notice of Significant Error if applicable. Significant errors prevent submissions from being entered into the TRI Data Processing Center data management system or do not allow the TRI Data Processing Center to verify the authenticity of the submission. Invalid forms, missing pages, no certification signature, no chemical name or CAS number are examples of significant errors. These types of errors require that the reporting facility make corrections on their FDP (or provide the TRI Data Processing Center with a brief explanation why they do not believe that it is an error) or submit a revised Form R or Form A. A facility must respond to a Notice of Significant Error within 21 days of receipt. Failure to respond within the initial 21 day requirement could result in the issuance of a Notice of Noncompliance (NON). A Notice of Noncompliance is not included in a FDP and is mailed separately.

The Agency will issue a conditional **Notice of Noncompliance (NON)** to a facility for failure to respond to a Notice of Significant Error (NOSE) within the required period. A NON will require a facility to take the corrective action noted in the NOSE via the FDP within 21 days and respond to the Agency that corrective action has been taken. If a facility fails to respond to the NON within the required time period, the Agency may take further action.

Facilities must keep copies, for three years, of submitted Form R reports and Form A certifications and all documentation used to complete their submissions. This documentation should include calculations for threshold determinations, the basis of exemptions applied, and the estimation techniques and data used for all quantities reported on the Form R and Form A.

C. Common Errors in Completing Form R Reports and Form A Certification Statements, including Reporting Determination Errors

General Considerations

- " **Incomplete Forms.** A complete Form R report for a single EPCRA section 313 chemical or single EPCRA section 313 chemical category consists of five pages stapled together. EPA cannot enter into the database data from a package that contains only one page 1, but several page 2s, 3s, 4s, and/or 5s. Such forms are considered incomplete submissions.

Threshold Determinations

- " **Calculating threshold determinations.** Annual quantities manufactured, processed, or otherwise used for section 313 chemicals must be calculated, not surmised. The assumption that thresholds are exceeded commonly leads to error.
- " **Misclassification of EPCRA section 313 chemical activity.** Failure to correctly classify an EPCRA section 313 chemical activity may result in an incorrect threshold determination. As a result, a facility may fail to submit the required Form R.
- " **EPCRA section 313 chemical activity overlooked.** Many facilities believe that because the section 313 reporting requirement pertains to manufacturers, only the use of EPCRA section 313 chemicals in manufacturing processes must be examined. *Any activity* involving the manufacture, process, or otherwise use of an EPCRA section 313 chemical or chemical category must be included in threshold determinations. Commonly overlooked activities include importation of chemicals, generation of waste byproducts, processing of naturally occurring metals and metal category compounds in ore, manufacturing and processing of reaction intermediates, the use of chemicals for cleaning of equipment, and the generation of byproducts during combustion of coal and/or oil. Facilities should take a systematic approach to identify all chemicals and mixtures used in production and non-production capacities, including catalysts, well treatment chemicals, and wastewater treatment chemicals.

- " **Considering EPCRA section 313 chemicals in mixtures and other trade name products.** EPCRA section 313 chemicals contained in mixtures (including ores and stainless steel alloys) and other trade name products must be factored into threshold determinations and release and other waste management determinations, provided that the *de minimis* exemption cannot be taken. When the EPCRA section 313 chemical being reported is a component in a mixture or other trade name product, report only the weight of the EPCRA section 313 chemical in the mixture. Refer to Section B.4b of this document to calculate the weight of an EPCRA section 313 chemical in a mixture or other trade name product.

- " **Overlooking manufacturing.** Coincidental manufacturing must not be overlooked. If coal and/or fuel oil and other raw materials that contain EPCRA section 313 chemicals are used in boilers/burners, there is a potential for the coincidental manufacture of EPCRA section 313 chemicals such as sulfuric acid (acid aerosols), hydrochloric acid (acid aerosols), hydrogen fluoride, and metal category compounds. Additionally, manufacturing of EPCRA section 313 chemicals during waste treatment is commonly overlooked. For example, the treatment of nitric acid may result in the manufacturing of a reportable chemical (nitrate compounds).

Container Residue

- " **Overlooking container residue.** Container residue must not be disregarded in release and other waste management calculations. Even a "RCRA empty" drum is expected to contain a residue and it must be considered for TRI reporting. Additionally, on-site drum rinsing and disposal of the rinsate will result in a release and other waste management activity. Refer to "Estimating Releases and Waste Treatment Efficiencies for Toxic Chemical Reporting Forms."

Part I. Facility Identification Information

Section 1. Reporting Year

- " **Invalid Forms.** The correct version of the form for the reporting year in question must be used. Forms provided for reporting years 1987-1990 must not be used to report data for reporting years 1991-1995. Form Rs provided for reporting years 1987-1995 must not be used to report data for years 1996 and later.

Section 2. Trade Secret Information

- " **Incorrect completion of trade secret information.** The responses to trade secret questions in Part I Section 2 and Part II Section 1.3 of Form R/Form A must be consistent. If trade secrecy is indicated, a sanitized Form R/Form A and two trade secret substantiations (one sanitized) must be submitted in the same package as the trade secret Form R/Form A. Part II Section 1.3 should be blank if no trade secret claim is being made. Also, if you indicate in Part I, Section 2.1 that you are **not** claiming trade secret information, leave Part I, 2.2 blank.

Section 3. Certification

- " **Missing certification signature.** If you are submitting your Form R and/or Form A by hardcopy, an original certification signature must appear on page 1 of every Form R and/or Form A submitted to EPA. If you are submitting your Form R and/or Form A via diskette or electronically through EPA's Central Data Exchange (CDX), a certification letter containing the certification language as noted in 40 CFR § 372.85(b)(2), with the signature of a senior management official, must accompany the submission. The certification letter must contain the certification language. An example of the certification letter is included in Section A of these instructions.

Section 4. Facility Identification

- " **Incorrect latitude and longitude coordinates.** Latitude and longitude coordinates should be determined using the correct measurement techniques and reported in degrees, minutes, and seconds. For additional guidance, see Appendix E of this document.
- " **"Questionable" entries.** Incorrect entries may require corrections to be made by the facility. Questionable entries may include:
- Missing or incorrect street address;
 - Missing or incorrect ZIP codes;
 - Missing County names;
 - Invalid SIC codes;
 - Missing or invalid Dun & Bradstreet numbers;
 - Missing or invalid RCRA, NPDES, or UIC numbers; and
 - Incomplete off-site and POTW information (e.g., missing city name)

If amounts are reported in units other than pounds (e.g., metric

units) or with exponential numbers, EPA may require a revision of the Form R/Form A submitted. The exception is for the reporting of dioxin and dioxin-like compounds where the amounts are reported in grams.

Part II. Chemical-Specific Information

Section 1. Toxic Chemical Identity

- " **Reporting chemical abstract service (CAS) numbers in Section 1.1.** Beginning with the 1991 reporting year, EPA has assigned alphanumeric category codes to the twenty chemical categories for the purposes of reporting the CAS number field in Section 1.1. When completing a Form R for a chemical category, the appropriate code for that category must be provided in Section 1.1. The CAS numbers are listed in Table II: "Section 313 Toxic Chemical List," and if needed, the category codes are listed in Appendix B: "Reporting Codes for EPA Form R." Category guidance documents are listed in the Chemical and Industry Guidance Documents section in this document.
- " **Failure to check for synonyms.** Some reportable chemicals (especially glycol ethers and toluene diisocyanates) have many synonyms that do not readily imply they are in the category. For example, "benzene,1,3-diisocyanatomethyl" may not be readily recognized as "toluene diisocyanate (mixed isomers)."
- " **Invalid chemical identification in Section 1.2.** The CAS number and the chemical name reported here must exactly match the listed official EPCRA section 313 CAS number and EPCRA section 313 chemical name.
- " **Failure to consider an EPCRA section 313 chemical qualifier.** Only EPCRA section 313 chemicals in the form specified in the qualifier require reporting under section 313 and should be reported on Form R with the appropriate qualifier in parentheses. For example, isopropyl alcohol is listed on the EPCRA section 313 chemical list with the qualifier "manufacturing- strong acid process, no supplier notification." Thus, the ONLY facilities that should report this EPCRA section 313 chemical are those that manufacture isopropyl alcohol by the strong acid process.
- " **Generic chemical name in Section 1.3.** A generic chemical name should only be provided if the section 313 chemical identity is claimed as a trade secret.

Section 2. Mixture Component Identity

" **Identifying chemicals used in mixtures.** Facilities should carefully review the most recent MSDS or supplier notification for every mixture brought on-site to identify all section 313 chemicals used during a reporting year. Although some mixtures may not have MSDSs, the best readily available information should be used to determine the presence of EPCRA section 313 chemicals in ores and alloys.

" **Mixture names in Section 2.1.** Mixture names are to be entered here only if the supplier is claiming the identity of the EPCRA section 313 chemical a trade secret and that is the sole identification. Mixture names that include the name or CAS number of one or more EPCRA section 313 chemicals are not valid uses of the mixture name field.

Section 3. Activities and Uses of the Toxic Chemical at the Facility

" **Reporting EPCRA section 313 chemical activity.** EPCRA section 313 chemical activity is commonly overlooked or misclassified. *Any activity* involving the manufacture, process, or otherwise use of an EPCRA section 313 chemical must be examined. For example, waste treatment operations otherwise use EPCRA section 313 chemicals to treat waste streams and may coincidentally manufacture an additional EPCRA section 313 chemical as a result of the treatment reaction. Such activity must be considered. Further, EPCRA section 313 chemical activity must be correctly classified as either "manufactured," "processed," or "otherwise used."

Section 3.1 "Manufacture" means to produce, prepare, compound, or import an EPCRA section 313 chemical.

Section 3.2 "Process" means the preparation of an EPCRA section 313 chemical after its manufacture, which usually includes the incorporation of the EPCRA section 313 chemical into the final product, for distribution in commerce.

Section 3.3 "Otherwise use" encompasses any use of an EPCRA section 313 chemical that does not fall under the terms "manufacture" or "process," and includes treatment for destruction, stabilization (without subsequent distribution in commerce),

disposal, and other use of an EPCRA section 313 chemical, including an EPCRA section 313 chemical contained in a mixture or other trade name product. Otherwise use of an EPCRA section 313 chemical does not include disposal, stabilization (without subsequent distribution in commerce), or treatment for destruction unless:

1. The EPCRA section 313 chemical that was disposed, stabilized, or treated for destruction was received from off-site for the purposes of further waste management; or
2. The EPCRA section 313 chemical that was disposed, stabilized, or treated for destruction was manufactured as a result of waste management activities on materials received from off-site for the purposes of further waste management activities.

For example, solvents in paint applied to a manufactured product are often misclassified as processed, instead of otherwise used. Because the solvents are not incorporated into the final product, the solvent is being otherwise used, not processed.

Section 4. Maximum Amount of the Toxic Chemical On-site at Any Time During the Calendar Year

" **Maximum amount on-site left blank.** Failure to provide the appropriate code for maximum amount on site.

Section 5. Quantity of the Toxic Chemical Entering Each Environmental Medium On-site

" **Incorrectly reporting stack emissions.** Fugitive emissions from general indoor air should not be reported as stack emissions when released from a single building vent. Additionally, stack emissions from storage tanks, including loading, working, and breathing losses from tanks, should not be overlooked or reported as fugitive emissions.

" **Overlooking releases to land.** Section 313 chemicals placed in stockpiles or in surface impoundments should be reported as a "release to land" even if no section 313 chemicals leak from these sources. Quantities of section 313 chemicals land-treated should be reported as a "release to land."

Section 6. Transfers of the Toxic Chemical in Wastes to Off-site Locations

- " **Reporting discharges to POTWs in Section 6.1.** When quantities of a listed mineral acid are neutralized to a pH of 6 or greater, the quantity reported as discharged to a POTW should be reported as zero. It is incorrect to enter "NA" (Not Applicable), in such a situation.
- " **Reporting other off-site transfers in Section 6.2.** Any quantities reported in Sections 8.1, 8.3, 8.5, and 8.7 as sent off-site for disposal, treatment, energy recovery, or recycling, respectively, must also be reported in Section 6.2 along with the receiving location and appropriate off-site activity code.

Section 7A. On-Site Waste Treatment Methods and Efficiency

- " **Failure to report waste treatment methods in Section 7A.** Waste treatment methods used to treat waste streams containing EPCRA section 313 chemicals, and the efficiencies of these methods, must be reported on Form R. Information must be entered for all waste streams, even if the waste treatment method does not affect the EPCRA section 313 chemical. If no waste treatment is performed on waste streams containing the EPCRA section 313 chemical, the box marked "Not Applicable" in Section 7A should be checked on Form R.

Section 7B. On-Site Energy Recovery Processes

- " **Incorrect reporting of waste treatment methods in Section 7A.** The type of waste stream, influent concentration, and waste treatment method for each waste stream are required to be reported on Form R using specific codes, along with the waste treatment efficiency expressed as percent removal. The waste treatment codes are listed in Appendix B: "Reporting Codes for EPA Form R," of the *Toxic Chemical Release Inventory Reporting Forms and Instructions*.
- " **Reporting on-site energy recovery methods in Section 7B.** When a quantity is reported in Section 8.2 as combusted for energy recovery on-site, the type of energy recovery system used must be reported in Section 7B, and vice versa.

Section 7C. On-Site Recycling Processes

- " **Reporting on-site recycling methods in Section 7C.** When a quantity is reported in Section 8.4 as recycled on-site, the type of recovery method must be reported in Section 7C, and vice versa.

Section 8. Source Reduction and Recycling Activities

The entries in this section must be completed, even if your facility does not engage in source reduction or recycling activities.

- " Columns C and D, the future year projections for questions 8.1 through 8.7, must be completed. EPA expects a reasonable estimate for the future year projections. Zero can be used in columns C and D to indicate that the manufacture, process, or otherwise use of the chemical will be discontinued. In such cases, columns C and D for Section 8.1 through 8.7 must all contain zeroes.
- " It is incorrect to use range codes to report quantities in Section 8. Range codes can be used only in Sections 5 and 6 of Form R.
- " It is incorrect to use the same codes from Section 4 for reporting the maximum amount of the reported EPCRA section 313 chemical on-site to report quantities in Section 8.
- " Quantities reported in Section 8.1 through 8.7 are mutually exclusive and additive. This means that quantities of the reported EPCRA section 313 chemical must not be double-counted in Section 8.1 through 8.7.
- " Some double-counting errors have been due to confusion over the differences in how on-site treatment of an EPCRA section 313 chemical is reported in Section 7A as compared to Section 8. In Section 7A, information on the treatment of *waste streams* containing the EPCRA section 313 chemical is reported, along with the percent efficiency in terms of destruction or removal of the EPCRA section 313 chemical from each waste stream. In Section 8, only the quantity of the *EPCRA section 313 chemical* actually destroyed through the treatment processes reported in Section 7A is reported in Section 8.6 to avoid double-counting within Sections 8.1 through 8.7.
- " Quantities reported in Section 8.1 through 8.7 must not be reported in Section 8.8 and vice versa.
- " Any time a reported EPCRA section 313 chemical is contained in a waste, and the waste is associated with

routine production-related activities and is recycled, combusted for energy recovery, treated, disposed, or otherwise released either on- or off-site, that quantity of the EPCRA section 313 chemical must be included in the quantities reported in Sections 8.1 through 8.7

" **Reporting quantities in Section 8.1 "Quantity released."** Quantities of EPCRA section 313 chemicals that are released (including disposed) on-site and reported in Section 5 of Form R must be reported in Section 8.1. Quantities of EPCRA section 313 chemicals transferred off-site for the purposes of disposal reported in Section 6.2 must appear in Section 8.1 using the following codes:

- " M10 Storage Only;
- " M41 Solidification/Stabilization — Metals and Metal Category Compounds Only;
- " M62 Wastewater Treatment (excluding POTW) — Metals and Metal Category Compounds Only;
- " M63 Surface Impoundment
- " M64 Other Landfills
- " M65 RCRA Subtitle C Landfills
- " M71 Underground Injection;
- " M73 Land Treatment;
- " M79 Other Land Disposal;
- " M90 Other Off-Site Management; and
- " M94 Transfer to Waste Broker—Disposal
- " M99 Unknown.

Metals and metal category compounds transferred off-site to POTWs in Section 6.1 must appear in Section 8.1. To report correctly in Section 8.1, a facility must include quantities that are released to the environment, either on-site or off-site, excluding releases due to catastrophic events or non-production related activities.

§ 8.1 = § 5 + § 6.1 (metals and metal category compounds only) + § 6.2 (disposal only) – § 8.8 (on-site or off-site release due to catastrophic events)¹

" **Reporting quantities in Section 8.2 "Quantity used for energy recovery on-site."** A quantity must be reported in Section 8.2 for the current (reporting) year when a method of on-site energy recovery is reported in Section 7B, and vice versa. An error facilities make when completing Form R is to report the methods of energy recovery used on-site in Section 7B but not report the total quantity associated with those methods. Another

error is to report a quantity in this section if the combustion of the EPCRA section 313 chemical took place in a system that did not recover energy (e.g., an incinerator). A quantity of the EPCRA section 313 chemical combusted for energy recovery must not be reported if the EPCRA section 313 chemical does not have a significant heating value. Examples of EPCRA section 313 chemicals that do not have significant heating values include metals, metal portions of metal category compounds, and halons. Metals and metal portions of metal compounds will never be treated or combusted for energy recovery. Any quantities of the EPCRA section 313 chemical associated with non-production related activities such as catastrophic releases and remedial actions, as well as other one-time events not associated with routine production practices that were combusted for energy recovery on-site must not be included in Section 8.8.

" **Reporting quantities in Section 8.3 "Quantity used for energy recovery off-site."** As in Section 8.2, a quantity must not be reported in this section if the off-site combustion of the EPCRA section 313 chemical took place in a system that did not recover energy (e.g., incinerator). A quantity of an EPCRA section 313 chemical must not be reported as sent off-site for the purposes of energy recovery if the EPCRA section 313 chemical does not have a significant heating value. Examples of EPCRA section 313 chemicals that do not have significant heating values include metals, metal portions of metal category compounds, and halons. Metals and metal portions of metal category compounds will never be combusted for energy recovery. Quantities must be reported in Section 8.3 that are reported in Section 6.2 as transferred off-site for the purposes of combustion for energy recovery using the following codes:

- " M56 Energy Recovery
- " M92 Transfer to Waste Broker — Energy Recovery

§ 8.3 = § 6.2 (energy recovery) – § 8.8 (off-site energy recovery due to catastrophic events)²

" **Reporting quantities in Section 8.4 "Quantity recycled on-site."** A quantity must be reported in Section 8.4 for the current reporting year when a method of on-site recycling is reported in Section 7C, and vice versa. An error facilities make when completing Form R is to report the methods of recycling used on-site in Section 7C but not report the total quantity recovered using those methods.

¹ §8.8 includes quantities of toxic chemicals released on site or managed as a waste off site due to remedial actions, catastrophic events, or one-time events not associated with the production processes.

In addition, only the amount of the chemical that was actually recovered is to be reported in Section 8.4. Any quantities of the EPCRA section 313 chemical associated with non-production related activities such as catastrophic releases and remedial actions, as well as other one-time events not associated with routine production practices that were recycled on-site must not be included in Section 8.8.

" **Reporting quantities in Section 8.5. "Quantity recycled off-site."** Quantities reported in Section 6.2 as transferred off-site for the purposes of recycling must be included in Section 8.5 using the following codes:

- " M20 Solvents/Organic Recovery;
- " M24 Metals Recovery;
- " M26 Other Reuse or Recovery;
- " M28 Acid Regeneration;
- " M93 Transfer to Waste Broker — Recycling.

Quantities that are actually recycled at an off-site facility must not be reported in Section 8.5 — facilities should report the quantity that was sent off-site for the purposes of recycling.

$$\text{\$8.5} = \text{\$6.2 (recycling)} - \text{\$8.8 (off-site recycling due to catastrophic events)}^2$$

" **Reporting quantities in Section 8.6 "Quantity treated on-site."** Quantities may not always have to be reported in Section 8.6 when Section 7A is completed. This is because the information reported in Section 7A and Section 8 is different. Information on how waste streams containing the reported EPCRA section 313 chemical are treated is reported in Section 7A, while the quantity of the EPCRA section 313 chemical actually destroyed as a result of on-site treatment is reported in Section 8.6. If a quantity is reported in Section 8.6, Section 7A must be completed but the reverse may not be true. This may result in apparent discrepancies between Section 7A and Section 8. For example, a facility may treat wastewater containing an EPCRA section 313 chemical by removing the EPCRA section 313 chemical and then disposing of it on-site. The treatment of the wastewater would be reported in Section 7A, with an efficiency estimate based on the amount of the EPCRA section 313 chemical removed from the wastewater. Although the waste stream has been treated because the EPCRA section 313 chemical has been removed, the EPCRA section 313 chemical has not been treated because it has not been destroyed. The facility would report only the amount of the EPCRA section 313 chemical actually destroyed during treatment in Section 8.6 and the amount ultimately disposed in Section 8.1 to avoid double-counting the same quantity in Section 8. In cases where the EPCRA section

313 chemical is not destroyed during a treatment process and subsequently enters another activity, such as disposal (e.g., metals removed from wastewater and subsequently disposed on-site), the quantity of the EPCRA section 313 chemical would be reported as disposed in Section 8.1, not as treated in Section 8.6. Any quantities of the EPCRA section 313 chemical associated with non-production related activities such as catastrophic releases and remedial actions, as well as other one-time events not associated with routine production practices that were treated for destruction on-site must not be included in Section 8.8. Metals generally will not be treated for destruction.

" **Reporting quantities in Section 8.7 "Quantity treated off-site."** Quantities reported in Section 6.2 as transferred off-site for the purposes of treatment must be included in Section 8.7 using the following codes:

- " M50 Incineration/Thermal Treatment;
- " M54 Incineration/Insignificant Fuel Value;
- " M61 Wastewater Treatment (excluding POTW);
- " M69 Other Waste Treatment; and
- " M95 Transfer to Waste Broker — Waste treatment.

Quantities of an EPCRA section 313 chemical, except metals and metal category compounds, sent off-site to a POTW should also be reported in Section 8.7. If you know, however, that a chemical is not treated for destruction at the POTW you should report that quantity in Section 8.1 instead of 8.7.

To report correctly EPCRA section 313 chemicals in Section 8.7, use the following equation.

$$\text{\$8.7} = \text{\$6.1 (excluding most metal/metal category compounds)} + \text{\$6.2 (treatment)} - \text{\$8.8 (off-site treatment due to catastrophic events)}^2$$

" **Reporting quantities in Section 8.8 "Quantity released to the environment as a result of remedial actions, catastrophic events or one-time events not associated with production processes."** The quantities that are reported in Section 8.8 are associated with non-production related activities such as catastrophic releases and remedial actions, as well as one-time events not associated with routine production practices, that were released directly to the environment or transferred off-site for the purposes of recycling, energy recovery, treatment or disposal. Quantities reported in

²\\$8.8 includes quantities of toxic chemical released on-site or managed as waste off-site due to remedial actions, catastrophic events, or one-time events not associated with the production processes.

Section 8.8 must not be reported in Section 8.1 through 8.7.

- " **Reporting the production ratio in Section 8.9.** A production ratio or activity index must be provided in Section 8.9. A zero is not acceptable and "NA" (Not Applicable) can be used only when the reported EPCRA section 313 chemical was not manufactured, processed, or otherwise used in the year prior to the reporting year.
- " **Calculating production ratio in Section 8.9.** In calculating a production ratio for "otherwise used" chemicals, an activity index must be used rather than quantities purchased or released from year to year.
- " **Reporting source reduction activities in Section 8.10.** It is an error to report a source reduction activity in Section 8.10 and not report at least one method used to identify that activity and vice versa.

D. FDP Messages Used to Report Notices of Significant Errors

Note: EPA is continually trying to improve the error checking system for TRI submissions. As a result, a small number of the error messages in this appendix will be changed by the time the Reporting Year 2002 submissions are checked. Most of these messages will remain the same. You can look for changes to these error messages on the TRI home page at <www.epa.gov/tri>

1. You have used an invalid Form R or Form A by using either a form not applicable for the reporting year, or a facsimile form that has not been approved by EPA. Resubmit your data on a current EPA approved Form R or A.
2. Pages were missing from the form received. Correct this by resubmitting a complete certified form for this chemical substance.
3. Multiple chemicals were reported in your Form R. You must submit a separate and complete Form R for each chemical cited.
4. You have provided a valid CAS number and a valid chemical name, but they do not match. Respond by providing a valid CAS Number and matching Chemical Name.
5. You have left part or all of the chemical identification sections blank. Respond by providing a valid CAS Number and matching Chemical Name or Mixture Component Identity.
6. You reported a CAS number and/or chemical name that are invalid. Respond by providing a valid CAS Number

and/or matching Chemical Name.

7. Your form indicated Trade Secret status with an indication that this form is a Sanitized version, but the report contains no Generic Chemical Name. You must provide a Generic Chemical Name for this sanitized form.
8. You did not sign the Form or certification letter. Per EPCRA Section 313(g)(1)(B), each submission must contain an original signature certifying the accuracy and completeness of the information reported by signing the certification statement on the Form or certified letter. Please be sure to sign the certification statement in this FDP to certify your submission data.
9. You have reported a Persistent Bioaccumulative Toxic (PBT) chemical on a Form A. PBT chemicals (e.g., Dioxin and Dioxin-like Compounds, Lead Compounds, Mercury Compounds and Polycyclic Aromatic Compounds (PACs)) are not eligible for the alternate threshold. Thus, they must be reported on a Form R. Please resubmit your data on a Form R.
10. You have reported a negative number(s) in Part II, Sections 5 and/or 6 and/or 8 of your Form R. Quantities reported in these sections must be 0 or greater. Please respond by providing correct release or other waste management data.
11. You did not complete Part II, Sections 5 and 6. Please provide the required information; otherwise indicate NA.
12. You did not complete Part II, Section 7. Please provide the required information; otherwise indicate NA.
13. You did not complete Part II, Section 8. Please provide the required information; otherwise indicate NA.

E. Messages Used to Report Notices of Technical Errors (NOTEs) and Non-technical Data Changes (NDCs)

Invalid codes throughout Form R

14. You submitted an invalid code. To correct this, consult the instructions for the proper table value and provide a valid code value. [Specific location on the form of the invalid code is given.] (NOTE)
15. PBT chemicals (e.g., Dioxin and Dioxin-like Compounds, Lead Compounds, Mercury Compounds and Polycyclic Aromatic Compounds (PACs)) are ineligible for range reporting for on-site releases and transfers off-site for further waste management. Please provide specific release, transfer, and other waste management values.(NOTE)

Appendix C

16. For aluminum (fume or dust) or zinc (fume or dust), the Waste Management codes M56 and M92 are unacceptable. Please provide the proper Waste Management codes for these chemicals. (NOTE)
17. For asbestos (friable), the Waste Management codes M56 and M92 are unacceptable. Please provide the proper Waste Management codes for these chemicals. (NOTE)

General Errors for both the Form R and/or Form A

18. You reported a negative value for a release, transfer or other waste management quantity. Please provide a non-negative value for the specified part and section. (NOTE)
19. You have reported a value for a PBT chemical beyond seven digits to the right of the decimal. EPA's data management systems support data precision up to seven digits to the right of the decimal. EPA has truncated your numeric submission so the number of digits to the right of the decimal do not exceed seven. If this was incorrect, specify the correct value, not exceeding seven digits to the right of the decimal. (NDC)

Errors in Part I, Facility Identification Information

20. No selection was made in Part I, Section 2.1 and 2.2 (Trade Secret Information) and a generic chemical name was not provided in Part II, Section 1.3. Therefore, the "No" box was selected in Part I, Section 2.1. If this was incorrect, and you intended to make a trade secret claim of the identity of the toxic chemical, you must resubmit following the requirements of 40 CFR Part 350 to claim trade secret. (NDC)
21. You indicated trade secret in Part I, Section 2.1 (Trade Secret Information) but made no selection for Part I, Section 2.2 (sanitized/unsanitized) and did not provide a generic chemical name in Part II, Section 1.3. EPA changed your selection in Part I, Section 2.1 to indicate that a trade secret claim is not being made. If this was incorrect, and you intended to make a trade secret claim for the identity of the toxic chemical, you must resubmit following the requirements of 40 CFR Part 350 to claim trade secret. (NDC)
22. No Public Contact name and/or telephone number was listed. Please provide the name and telephone number of your Public Contact. (NOTE)
23. No Technical Contact name and/or telephone number was listed. Please provide the name and telephone number of your Technical Contact. (NOTE)
24. The Federal Facility box was not checked on your form but we believe you are a Federal Facility. Unless you respond that you are not a Federal Facility, we will

continue to treat you as a Federal Facility. (NOTE)

25. A valid SIC code was not provided. Please provide at least one valid primary four-digit SIC code. (NOTE)
26. You reported an invalid state code. If the address is in the US, please use a valid US Postal Service state code (see Table III of the Reporting Forms and Instructions). If the address is not in the US, please enter a valid code in the Country Field (see Table IV of the Reporting Forms and Instructions) (NOTE)
27. Either Box A (An Entire Facility) or Box B (Part of a Facility) should be checked in Part I, Section 4.2. One of the 2 boxes must be checked, but not both. (NOTE)
28. If applicable, check either Box C (Federal Facility) or Box D (GOCO) in Part I, Section 4.2, but do not check both boxes. (NOTE)
29. You did not enter Longitude or Latitude values for the facility. Please enter a Longitude and Latitude value. (NOTE)
30. You entered an invalid Longitude/Latitude value(s). Longitude degrees must be between 0 and 180, latitude degrees must be between 0 and 90; minutes and seconds for either latitude or longitude must be between 0 and 60. (NOTE)
31. Dun and Bradstreet Numbers (Part I Section 4.7) are typically 9 characters in length. Please check the number(s) submitted. If they are incorrect, please make the appropriate changes. If you believe that they are correct, no further action is necessary. (NOTE)
32. EPA Identification Numbers (RCRA I.D. No. Part I Section 4.8) are typically 12 characters in length. Please check the number(s) submitted. If they are incorrect, please make the appropriate changes. If you believe that they are correct, no further action is necessary. (NOTE)
33. NPDES Permit Numbers (Part I, Section 4.9) are typically 9 characters in length. Please check the number(s) submitted. If they are incorrect, please make the appropriate changes. If you believe that they are correct, no further action is necessary. (NOTE)
34. Underground Injection Well Code (UIC) I.D. Numbers (Part I, Section 4.10) are typically 12 digits. Please check the number(s) you have supplied. If they are incorrect, please make appropriate changes. If you believe that they are correct, no further action is necessary. (NOTE)
35. If this is a North American phone number, please enter all 10 digits (i.e., include area code). If this is for another country, please begin the phone number with "011" as the prefix to your international telephone

number. (NOTE)

Errors in Part II, Section 1. Toxic Chemical Identity

36. You have correctly identified the chemical but have used a synonym for the chemical name. EPA has changed the Chemical Name to use the preferred TRI nomenclature. Please specify the correct CAS Number and matching Chemical Name. (NDC)
37. You reported a valid TRI CAS Number, a valid Chemical Name, and a generic Chemical Name. Therefore, the Generic Chemical Name was deleted. If this was incorrect, specify the Generic Chemical Name to be used. (NDC)
38. You reported a valid TRI CAS Number, a valid Chemical Name, and a Mixture Component Identity. Therefore, the Mixture Component Identity was deleted. If this was incorrect, specify the Mixture Component Identity to be used. (NDC)
39. EPA has changed the TRI chemical category code you reported in Part II, Section 1.1 from N151 to N150 (the code was incorrectly listed in some pages of the Reporting Forms and Instructions), the correct TRI chemical category code for Dioxin and Dioxin-like Compounds. If this is incorrect and you are not reporting Dioxin and Dioxin-like Compounds, please specify the correct CAS number or chemical category code and matching chemical name.(NDC)
40. You have reported for isopropyl alcohol (Only persons who manufacture by the strong acid process are subject) (CAS number 67-63-0). If you did not manufacture isopropyl alcohol by the strong acid process, you have submitted this form in error and should request that the form be withdrawn. (NOTE)

Errors in Form R, Part II, Section 1.4. Dioxin and Dioxin-like Compounds

41. EPA has deleted the entry of zeros in Part II, Section 1.4 because you indicated a CAS number or chemical category in Part II, Section 1.1 other than Dioxin and Dioxin-like Compounds. When reporting for a chemical other than Dioxin and Dioxin-like Compounds, you should leave Section 1.4 blank. (NDC)
42. You did not complete Section 1.4. If you report Dioxin and Dioxin-like Compounds in Part II, Sections 1.1 or 1.2, you must complete Section 1.4. Please report the distribution of chemicals included for Dioxin and Dioxin-like Compounds. If you do not have speciation data available, indicate NA. (NOTE)
43. Part II, Section 1.4 of your Form R contains data for Dioxin and Dioxin-like Compounds. However, you have indicated a CAS number or chemical category code in Part II, Section 1.1 other than Dioxin and Dioxin-like Compounds (N150). If you are reporting for Dioxin and

Dioxin-like Compounds, please provide the proper chemical category code (N150). Otherwise please indicate on the FDP that Section 1.4 should be left blank. (NOTE)

44. You did not provide values in all 17 boxes in Part II, Section 1.4 and/or the values do not total to 100%. When reporting the distribution of each member of the Dioxin and Dioxin-like Compounds category, you must fill in each of the 17 boxes in Part II, Section 1.4 with either 0 or a number between 0.01 and 100. The summation of the 17 fields in Section 1.4 must equal 100. Please review Part II, Section 1.4 and enter values where needed and/or adjust the percentages where needed so that their summation equals 100%. (NOTE)
45. You reported numeric values in Part II, Section 1.4 for a chemical that is not a Dioxin and Dioxin-like Compounds. It appears that the information reported in Part II, Section 1.4 is not valid. If you are reporting for Dioxin and Dioxin-like Compounds, please indicate on this FDP that the chemical category name in Part II, Section 1.2 should be Dioxin and Dioxin-like Compounds, or submit a new Form R. Otherwise, please indicate on this FDP that the values in Part II, Section 1.4 should be blank. (NOTE)
46. Part II, Section 1.4 of your Form R contains data for Dioxin and Dioxin-like Compounds. However, you have indicated both NA and a numeric value (which includes zero). When reporting the distribution of each member of the Dioxin and Dioxin-like Compounds category, you must fill in each of the 17 boxes in Part II, Section 1.4 with either 0 or a number between 0.01 and 100. The summation of the 17 fields in Section 1.4 must equal 100. If you do not have speciation data available, indicate NA rather than zero. (NOTE)

Errors in Part II, Section 3. Activities and Uses of Toxic Chemical At The Facility

47. You did not indicate in Part II, Section 3 which activity(ies) or use(s) of the EPCRA section 313 chemical occur at your facility. Please indicate at least one of the activity(ies) and use(s) of the EPCRA section 313 chemical occur at your facility. (NOTE)

Errors in Part II, Section 4. Maximum Amount of the Toxic Chemical Onsite At Any Time During the Calendar Year

48. You did not complete Part II, Section 4.1. Please provide a valid two digit code for the "maximum amount of chemical on-site at any time during the calendar year." (NOTE)

Errors in Part II, Section 5. Quantity of the Toxic Chemical Entering Each Environmental Medium Onsite

49. You did not complete Part II, Section 5.3. If you have discharged to water, please provide the Stream/Water Body name, the Release estimate or range code, Basis of Estimate and % from Stormwater; otherwise indicate “NA” (Not Applicable). (NOTE)
50. There are missing or incomplete data for Part II, Section 5.3. If you have discharged to water, please provide the Stream/Water Body name, the Release estimate or range code, Basis of Estimate and % from Stormwater; otherwise indicate “NA” (Not Applicable). (NOTE)
51. You did not complete Part II, Section 5. Please provide the Release estimate or range code and Basis of Estimate; otherwise indicate “NA” (Not Applicable). (NOTE)
52. There are missing or incomplete data for Part II, Section 5. Please provide the Release estimate or range code and Basis of Estimate; otherwise indicate “NA” (Not Applicable). (NOTE)

Errors in Part II, Section 6. Transfers of the Toxic Chemical In Wastes To Off-Site Locations

53. You did not complete Part II, Section 6.1, “discharges to POTW.” If you did not discharge wastewater containing the section 313 chemical to a POTW(s), enter “NA” (Not Applicable), otherwise please provide the Transfer amount or range code, Basis of Estimate, POTW Name and Location. (NOTE)
54. You reported a POTW(s) name and location but did not provide a Transfer amount. Please provide a Total Transfer amount or range code and Basis of Estimate; otherwise, if there was no transfer to a POTW of wastewater that contains or contained the section 313 chemical, delete the POTW location and indicate “NA” (Not Applicable) for the POTW transfer amount. (NOTE)
55. You reported a Total Transfer amount or range code and Basis of Estimate in Part II Section 6.1 but did not indicate a POTW name and location in Section 6.1.B. Please provide the POTW Name and Location. (NOTE)
56. You provided an incomplete POTW name and address. Please provide the name and complete address for the POTW. (NOTE)
57. There are missing or incomplete data for Part II, Section 6.1. Please provide the transfer amount or range code and Basis of Estimate for Discharges to POTWs. (NOTE)
58. You did not complete Part II, Section 6.2, “Transfers to Other Off- site Locations.” If you did not transfer the

waste containing the section 313 chemical to other off-site locations, enter “NA” (Not Applicable), otherwise please provide Offsite EPA ID, Name, Location, Transfer amount or range code, Basis of Estimate, and type of Waste Management code. (NOTE)

59. You reported an Off-site Transfer amount or range code and Basis of Estimate in Part II Section 6.2 but did not indicate an Off-site name and location in Section 6.2. Please provide the Off-site Name and Location. (NOTE)
60. You reported an Off-site name and location but did not provide a Transfer amount. Please provide a Total Transfer amount or range code, Basis of Estimate and type of Waste Management code; otherwise, if there was no transfer to this Off-site location, delete the Off-site name and location and indicate “NA” (Not Applicable) in the Off-site EPA Identification Number (RCRA ID No.) field. (NOTE)
61. You reported an Off-site name and location, but there are missing or incomplete data for the off-site transfer amount, basis of estimate and type of waste management code. Please provide the Off-site Transfer amount or range code, Basis of Estimate, and type of Waste Management code. (NOTE)
62. You provided incomplete off-site name and address data. For a transfer to a domestic off-site location, you must provide a street address, city, state, county and zip code. For a transfer to a foreign off-site location, you must provide a street address, city and a two character country code. (NOTE)
63. You reported an invalid Type of Waste Management code. For metals/metal compounds use only disposal and certain recycling activities codes. Consult the Reporting Instructions for metal and metal compounds and correct with a valid Waste Management (i.e., “M”) code. (NOTE)
64. You reported an invalid Type of Waste Management code. For Barium Compounds use only disposal and certain recycling activities codes, M61—Wastewater Treatment (Excluding POTW) or M69—Other Waste Treatment. Consult the Reporting Instructions for metal and metal compounds and correct with a valid Waste Management (i.e., “M”) code. (NOTE)
65. For non-metals codes M41 and M62 are unacceptable. Provide the appropriate Disposal or Other Waste Management code for this non-metal substance. (NOTE)

Errors in Part II, Section 7. On-Site Waste Treatment Methods and Efficiency

66. There are no data contained in all of Part II, Section 7A. If you do not treat wastes containing the EPCRA section

313 chemical at your facility, indicate “NA;” otherwise please provide the general waste stream code, waste treatment methods, range of influent concentration, waste treatment efficiency estimate and whether this is based on operating data for all on-site waste treatments for this chemical. (NOTE)

67. There are missing data in Part II, Section 7A. Please provide the general waste stream code, waste treatment methods, range of influent concentration, waste treatment efficiency estimate and whether this is based on operating data. (NOTE)
68. There are no data in Part II, Section 7B. If no on-site energy recovery processes are used for this section 313 chemical at your facility, indicate “NA;” otherwise please provide at least one three-character on-site energy recovery process code. (NOTE)
69. There are no data in Part II, Section 7C. If no on-site recycling processes are used for this section 313 chemical at your facility, indicate “NA;” otherwise please provide at least one three-character on-site recycling process code. (NOTE)

Errors in Part II, Section 8. Source Reduction and Recycling Activities

70. There are missing data for Part II, Section 8.1–8.7. Please provide an estimate or “NA” (Not Applicable) in each box for section 8.1–8.7, columns A, B, C, and D. You may only use “NA” (Not Applicable) when there is no possibility a release or transfer occurred. You may enter zero if the release or transfer was equal to or less than half a pound. (NOTE)
71. There are missing data in Part II, Section 8.8. Please provide an estimate or “NA” (Not Applicable). You may only use “NA” (Not Applicable) when there is no possibility a release or transfer occurred. You may enter zero if the release or transfer was equal to or less than half a pound. (NOTE)
72. There are no data in Part II, Section 8.9. Please provide a production ratio, an activity index, or “NA” (Not Applicable) if the chemical manufacture or use began during the current reporting year. (NOTE)
73. There are no data in Part II, Section 8.10. If your facility did not engage in any source reduction activity for the reported chemical, enter “NA” (Not Applicable) and answer 8.11. Otherwise please provide Source Reduction Activities and Methods code(s). (NOTE)
74. There are missing data in Part II, Section 8.10. Please provide Source Reduction Activities and Methods code(s). (NOTE)
75. Neither box was checked in section 8.11. Please check one of the boxes in section 8.11 indicating if additional information on source reduction, recycling, or pollution control activities is included with your Form R report. (NOTE)

Errors relating to the reconciliation of data in Part II, Section 8 and Part II, Sections 5, 6, and 7

76. You did not complete Sections 8.1–8.7 column B or 8.8. If you report releases in Part II, Section 5 and/or an off-site transfer in Section 6.2 and/or quantities transferred off-site to POTWs in Section 6.1, you must report an estimate in Part II, Sections 8.1 through 8.7 column B and/or Section 8.8. (NOTE)
77. You did not complete Sections 5, 6, or 7. If you enter an estimate in Part II, Sections 8.1 through 8.7, column B and/or Section 8.8, you must also report releases in Part II, Section 5 and/or off-site transfers in Section 6.2 and/or quantities transferred off-site to POTWs in Section 6.1 and/or waste treatment, energy recovery, or recycling codes in Section 7. Please provide data for Sections 5, 6, and/or 7. (NOTE)
78. You reported an estimate in Part II, Section 8.2, column B, “Quantity Used for Energy Recovery On-site,” but did not provide an on-site energy recovery code in Part II, Section 7B. Please provide an on-site energy recovery code for Part II, Section 7B. (NOTE)
79. You reported an “On-site Energy Recovery Process” code in Part II, Section 7B, but you did not provide an estimate of the quantity used for energy recovery in Part II, Section 8.2, column B. Please provide an estimate of the quantity used for energy recovery for Part II, Section 8.2, column B. (NOTE)
80. You reported an estimate in Part II, Section 8.4, column B “Quantity Recycled On-site” but did not provide an on-site recycling code in Part II, Section 7C. Please provide an on-site recycling code for Part II, Section 7C. (NOTE)
81. You reported one or more on-site recycling process codes in Part II, Section 7C but did not provide an estimate in Part II, Section 8.4, column B, “Quantity Recycled On-site.” Please provide an estimate of the quantity recycled for Section 8.4 column B. (NOTE)

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Appendix D. Supplier Notification Requirements

EPA requires some suppliers of mixtures or other trade name products containing one or more of the EPCRA section 313 chemicals to notify their customers. This requirement has been in effect since January 1, 1989.

This appendix explains which suppliers must notify their customers, who must be notified, what form the notice must take, and when it must be sent.

Who Must Supply Notification

You are covered by the section 313 supplier notification requirements if you own or operate a facility which meets all of the following criteria:

- (1) Your facility is in Standard Industrial Classification [SIC] codes 20–39;
- (2) You manufacture (including import) or process an EPCRA section 313 chemical; and
- (3) You sell or otherwise distribute a mixture or other trade name product containing the EPCRA section 313 chemical to either:
 - “ A facility in a covered SIC code (see Table I).
 - “ A person that then may sell the same mixture or other trade name product to a firm in a covered SIC code (see Table I).

Note that you may be covered by the supplier notification rules even if you are not covered by the section 313 release reporting requirements. For example, even if you have fewer than 10 full-time employees or do not manufacture or process any of the EPCRA section 313 chemicals in sufficient quantities to trigger the release and other waste management reporting requirements, you may still be required to notify certain customers.

Who Must Be Notified

Also, note that beginning with the 1998 reporting year, seven new industries are now covered by most of the EPCRA section 313 reporting requirements. These new industries are not required to comply with most of the supplier notification requirements. Industries whose primary SIC code is not within 20 through 39 are not required to initiate the distribution of notifications for EPCRA section 313 chemicals in mixtures or other trade name products that they send to their customers.

However, if these facilities receive notifications from their suppliers about EPCRA section 313 chemicals in mixtures or other trade name products, they should forward the notifications with the EPCRA section 313 chemicals they send to other covered users.

An example would be if you sold a lacquer containing toluene to distributors who then may sell the product to other manufacturers. The distributors are not in a covered SIC code, but because they sell the product to companies in covered SIC codes, they must be notified so that they may pass the notice along to their customers, as required.

The language of the supplier notification requirements covers mixtures or other trade name products that are sold or otherwise distributed. The “otherwise distributes” language includes intra-company transfers and, therefore, the supplier notification requirements at 40 CFR Section 372.45 apply.

Note that beginning with the first shipments in 1998, facilities in SIC codes 20–39 will be required to also notify facilities in the newly added industry groups.

Supplier Notification Must Include the Following Information:

- (1) A statement that the mixture or other trade name product contains an EPCRA section 313 chemical or chemicals subject to the reporting requirements of EPCRA section 313 (40 CFR 372);
- (2) The name of each EPCRA section 313 chemical and the associated Chemical Abstracts Service (CAS) registry number of each chemical if applicable. (CAS numbers are not used for chemical categories, since they can represent several individual EPCRA section 313 chemicals.); and

- (3) The percentage, by weight, of each EPCRA section 313 chemical (or all EPCRA section 313 chemicals within a listed category) contained in the mixture or other trade name product.

For example, if a mixture contains a chemical (i.e., 12 percent zinc oxide) that is a member of a reportable EPCRA section 313 chemical category (i.e., zinc compounds), the notification must indicate that the mixture contains a zinc compound at 12 percent by weight. Supplying only the weight percent of the parent metal (zinc) does not fulfill the requirement. The customer must be told the weight percent of the entire compound within an EPCRA section 313 chemical category present in the mixture.

How the Notification Must Be Made

The required notification must be provided at least annually in writing. Acceptable forms of notice include letters, product labeling, and product literature distributed to customers. If you are required to prepare and distribute a Material Safety Data Sheet (MSDS) for the mixture under the Occupational Safety and Health Act (OSHA) Hazard Communication Standard, your section 313 notification must be attached to the MSDS or the MSDS must be modified to include the required information. (A sample letter and recommended text for inclusion in an MSDS appear at the end of this appendix.)

You must make it clear to your customers that any copies or redistribution of the MSDS or other form of notification must include the section 313 notice. In other words, your customers should understand their requirement to include the section 313 notification if they give your MSDS to their customers.

When Notification Must Be Provided

You must notify each customer receiving a mixture or other trade name product containing an EPCRA section 313 chemical with the first shipment of each calendar year. You may send the notice with subsequent shipments as well, but it is required that you send it with the first shipment each year. Once customers have been provided with an MSDS containing the section 313 information, you may refer to the MSDS by a written letter in subsequent years (as long as the MSDS is current).

If EPA adds EPCRA section 313 chemicals to the section 313 list, and your products contain the newly added EPCRA section 313 chemicals, notify your customers with the first shipment made during the next calendar year following EPA's final decision to add the chemical to the list. For example, if

EPA adds chemical ABC to the list in September 1998, supplier notification for chemical ABC would have begun with the first shipment in 1999.

You must send a new or revised notice to your customers if you:

- (1) Change a mixture or other trade name product by adding, removing, or changing the percentage by weight of an EPCRA section 313 chemical; or
- (2) Discover that your previous notification did not properly identify the EPCRA section 313 chemicals in the mixture or correctly indicate the percentage by weight.

In these cases, you must:

- (1) Supply a new or revised notification within 30 days of a change in the product or the discovery of misidentified EPCRA section 313 chemical(s) in the mixture or incorrect percentages by weight; and
- (2) Identify in the notification the prior shipments of the mixture or product in that calendar year to which the new notification applies (e.g., if the revised notification is made on August 12, indicate which shipments were affected during the period January 1–August 12).

When Notifications Are Not Required

Supplier notification is not required for a “pure” EPCRA section 313 chemical unless a trade name is used. The identity of the EPCRA section 313 chemical will be known based on label information.

You are not required to make a “negative declaration.” That is, you are not required to indicate that a product contains no EPCRA section 313 chemicals.

If your mixture or other trade name product contains one of the EPCRA section 313 chemicals, you are not required to notify your customers if:

- (1) Your mixture or other trade name product contains the EPCRA section 313 chemical in percentages by weight of less than the following levels (These are known as *de minimis* levels)
 - " 0.1 percent if the EPCRA section 313 chemical is defined as an “OSHA carcinogen;”
 - " 1 percent for other EPCRA section 313 chemicals.

De minimis levels for each EPCRA section 313 chemical and chemical category are listed in Table II. PBT chemicals (except lead when contained in stainless steel, brass or bronze alloys) are not eligible for the *de minimis* exemption. Therefore, *de minimis* levels are not provided for these chemicals in Table II. However, for purposes of supplier notification requirements only, such notification is not required when the following PBT chemicals are contained in mixtures below their respective *de minimis* levels:

| Chemical or chemical category name | CAS number or chemical category code | Supplier notification limit (%) |
|--|--------------------------------------|---------------------------------|
| Aldrin | 309-00-2 | 1.0 |
| Benzo[g,h,i]perylene | 191-24-2 | 1.0 |
| Chlordane | 57-74-9 | 0.1 |
| Dioxin and dioxin-like compounds (manufacturing; and the processing or otherwise use of dioxin and dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacturing of that chemical) | N150 | 1.0* |
| Heptachlor | 76-44-8 | 0.1 |
| Hexachlorobenzene | 118-74-1 | 0.1 |
| Isodrin | 465-73-6 | 1.0 |
| Lead | 7439-92-1 | 0.1 |
| Lead compounds | N420 | 0.1** |
| Mercury | 7439-97-6 | 1.0 |
| Mercury compounds | N458 | 1.0 |
| Methoxychlor | 72-43-5 | 1.0 |
| Octachlorostyrene | 29082-74-4 | 1.0 |
| Pendimethalin | 40087-42-1 | 1.0 |
| Pentachlorobenzene | 608-93-5 | 1.0 |

| | | |
|--|-----------|--------|
| Polychlorinated biphenyls (PCBs) | 1336-36-3 | 0.1 |
| Polycyclic aromatic compounds category | N590 | 0.1*** |
| Tetrabromobisphenol A | 79-94-7 | 1.0 |
| Toxaphene | 8001-35-2 | 0.1 |
| Trifluralin | 1582-09-8 | 1.0 |
| <p>*The <i>de minimis</i> is 1.0 for all members except for 2,3,7,8-Tetrachlorodibenzo-<i>p</i>-dioxin which has a 0.1% <i>de minimis</i>. **The <i>de minimis</i> is 0.1 for inorganic lead compounds and 1.0 for organic lead compounds ***The <i>de minimis</i> is 0.1 except for benzo(a)phenanthrene, dibenzo(a,e)fluoranthene, benzo(j,k)fluorene, and 3-methylcholanthrene which are subject to the 1.0% <i>de minimis</i>.</p> | | |

- (2) Your mixture or other trade name product is one of the following:
- " An article that does not release an EPCRA section 313 chemical under normal conditions of processing or otherwise use.
 - " Foods, drugs, cosmetics, alcoholic beverages, tobacco, or tobacco products packaged for distribution to the general public.
 - " Any consumer product, as the term is defined in the Consumer Product Safety Act, packaged for distribution to the general public. For example, if you mix or package one-gallon cans of paint designed for use by the general public, notification is not required.
- (3) A waste sent off site for further waste management. The supplier notification requirements apply only to mixtures and trade name products. They do not apply to wastes.
- (4) You are initiating distribution of a mixture or other trade name product containing one or more EPCRA section 313 chemicals and your facility is in any of the covered SIC codes added during the 1997 industry expansion rulemaking, including facilities whose SIC code is within SIC major group codes 10 (except 1011, 1081, and 1094), 12 (except 1241); industry codes 4911 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce), 4931 (limited to facilities that combust coal and/or oil for the purpose of generating power for

distribution in commerce), or 4939 (limited to facilities that combust coal and/or oil for the purpose of generating power for distribution in commerce); or 4953 (limited to facilities regulated under the Resource Conservation and Recovery Act, subtitle C, 42 U.S.C. Section 6921 et seq.) or 5169, or 5171, or 7389 (limited to facilities primarily engaged in solvents recovery services on a contract or fee basis).

concentration is considered a trade secret and the basis for the upper bound concentration limit.

Information retained under 40 CFR 372 must be readily available for inspection by EPA.

Trade Secrets

Chemical suppliers may consider the chemical name or the specific concentration of an EPCRA section 313 chemical in a mixture or other trade name product to be a trade secret. If you consider the:

- (1) Specific identity of an EPCRA section 313 chemical to be a trade secret, the notice must contain a generic chemical name that is descriptive of the structure of that EPCRA section 313 chemical. For example, decabromodiphenyl oxide could be described as a halogenated aromatic.
- (2) Specific percentage by weight of an EPCRA section 313 chemical in the mixture or other trade name product to be a trade secret, your notice must contain a statement that the EPCRA section 313 chemical is present at a concentration that does not exceed a specified upper bound. For example, if a mixture contains 12 percent toluene and you consider the percentage a trade secret, the notification may state that the mixture contains toluene at no more than 15 percent by weight. The upper bound value chosen must be no larger than necessary to adequately protect the trade secret.

If you claim this information to be trade secret, you must have documentation that provides the basis for your claim.

Recordkeeping Requirements

You are required to **keep records for three years** of the following:

- (1) Notifications sent to recipients of your mixture or other trade name product;
- (2) All supporting materials used to develop the notice;
- (3) If claiming a specific EPCRA section 313 chemical identity a trade secret, you should record why the EPCRA section 313 chemical identity is considered a trade secret and the appropriateness of the generic chemical name provided in the notification; and
- (4) If claiming a specific concentration a trade secret, you should record explanations of why a specific

Sample Notification Letter

January 2, 2002

Mr. Edward Burke
Furniture Company of North Carolina
1000 Main Street
Anytown, North Carolina 99999

Dear Mr. Burke:

This letter is to inform you that a product that we sell to you, Furniture Lacquer KXZ-1390, contains one or more chemicals subject to section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA). We are required to notify you of the presence of these chemicals in the product under EPCRA section 313. This law requires certain industrial facilities to report on annual emissions and other waste management of specified EPCRA section 313 chemicals and chemical categories. Our product contains:

- " Toluene, Chemical Abstract Service (CAS) number 108-88-3, 20 percent, and
- " Zinc compounds, 15 percent.

If you are unsure whether you are subject to the reporting requirements of EPCRA section 313, or need more information, call EPA's EPCRA Call Center at 800 424-9346 or 703 412-9810. Your other suppliers should also be notifying you about EPCRA section 313 chemicals in the mixtures and other trade name products they sell to you.

Finally, please note that if you repackage or otherwise redistribute this product to industrial customers, a notice similar to this one should be sent to those customers.

Sincerely,

Emma Sinclair
Sales Manager
Furniture Products

Sample Notification on an MSDS

Furniture Products

Section 313 Supplier Notification

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

| <u>CAS Number</u> | <u>Chemical Name</u> | <u>Percent by Weight</u> |
|-------------------|----------------------|--------------------------|
| 108-88-3 | Toluene | 20% |
| NA | Zinc Compounds | 15% |

This information must be included in all MSDSs that are copied and distributed for this material.

Material Safety Data Sheet



Appendix E. How To Determine Latitude and Longitude

Beginning in the 2002 reporting year facilities can now use the *TRI Facility Siting Tool* to find their latitude and longitude coordinates. The siting tool and its instructions can be found on the Internet at www.epa.gov/tri/report/siting_tool/index.htm.

Latitude and longitude coordinates of reporting facilities are very important for pinpointing facility location and are a required data element on Form R. As such, EPA is encouraging facilities to make the best possible measurements when determining latitude and longitude. As with any other data element, missing, suspect, or incorrect data may result in EPA issuing a Notice of Technical Error to the facility.

Latitude is the distance north or south of the equator. Longitude is the distance east or west of the prime meridian (Greenwich, England). Latitude and longitude are measured in degrees, minutes, and seconds.

$$60'' \text{ (seconds)} = 1' \text{ (minute)}$$
$$60' \text{ (minutes)} = 1^\circ \text{ (degree)}$$

An important tool available for determining latitude and longitude for your facility is the U.S. Geological Survey (USGS) topographic quadrangle map. These maps are published in varying degrees of detail. The most detailed version of the topographic quadrangle map is in 7.5 x 7.5 minute increments with a scale of 1:24000 (i.e., one inch on the map represents 2,000 feet). Detailed topographic quadrangle maps are also available in 7.5 x 15 minute increments with a scale of 1:250,000 (i.e., one inch on the map represents approximately four miles). EPA strongly suggests that latitude and longitude measurements be made from one of the detailed maps described above. Otherwise, measurements will not accurately reflect the location of your facility and could be identified as an error on your Form R submission.

In order to identify the detailed topographic quadrangle map in which your facility is located, the USGS has published an index and a catalog of topographic maps available for each state. Both the index and the catalog are available in many libraries or free of charge from USGS Information Services (address on following page). The *Index to Topographic and Other Map Coverage* helps you to identify the most detailed map in which your facility is located. To identify the most detailed map, follow these simple steps on how to use the index:

- (1) The beginning of each index contains a map of the state, broken into numbered quadrangular sections. The numbered quadrangular sections are called general areas of interest. Identify the numbered section in which your facility is located.

- (2) The subsequent pages of the index contain detailed maps of each general area of interest, in numerical order. Identify the detailed map corresponding to the numbered general area of interest identified in Step 1.
- (3) Within this detailed map, identify the smaller quadrangular area in which your facility is located. This smaller quadrangular section is the specific area of interest. Record first the letter then the number coordinate for your specific area of interest (e.g., E4).
- (4) Using the chart found on the same page as the detailed map of the general area of interest, record the name of the specific area of interest in which your facility is located, identified by the letter and number coordinates (e.g., Richmond).

The name of the specific area of interest and its corresponding letter and number coordinates identify the most detailed topographic quadrangle map in which your facility is located. To identify the map reference code and file number necessary to order this map, follow these simple steps for using the *Catalog of Topographic and Other Published Maps* for the state in which your facility is located:

- (5) The beginning of the catalog explains the meaning of the reference code. On the pages following this explanation, there are charts listed alphabetically by the name of the specific area of interest with corresponding file numbers and map reference codes. Using the name of the specific area of interest recorded in Step 4, identify the file number and map reference code from the chart for the map in which your facility is located (e.g., file number 00692, map reference code 37977-E4-TF-024-00).
- (6) Use the file number and map reference code to obtain the specific topographic quadrangle map in which your facility is located.

These detailed topographic quadrangle maps are available in many libraries or for purchase from USGS Information Services and from private map dealers. The *Catalog of Topographic and Other Published Maps* contains a list of map depository libraries and topographic map dealers for each state covered in the catalog.

To purchase a topographic quadrangle map from the USGS, you must send a written request to USGS Information Services, containing the file number, map reference code, the name of the city, state and zip code in which your facility is located, payment of \$6.00 per map

sheet and a handling charge of \$5.00 for each order mailed.

USGS map products can be ordered from:

USGS Information Services
P.O. Box 25286
Denver Federal Center
Denver, CO 80225
303 202-4700
Email: infoservices@usgs.gov
ALLOW 5 WEEKS FOR DELIVERY

In addition, you may purchase a topographic quadrangle map from the USGS through a USGS Public Inquiry Office. The Public Inquiry Offices are listed for each state on the inside back cover of the *Catalog of Topographic and Other Published Maps*.

If you need help in determining your latitude and longitude, once you have the necessary map, the **Earth Science Information Center** can provide assistance:

888 ASK-USGS
ask@usgs.gov

Please call in advance of the section 313 reporting deadline to avoid unnecessary delays.

Determining Your Facility's Latitude and Longitude

(See diagram next page.)

Once you have obtained the correct map for your facility EPA recommends that you follow the five steps below to determine the latitude and longitude of your facility:

- (1) Mark the location of your facility on the map with a point. If your facility is large, choose a point central to the production activities of the facility. If certain structures in your facility are represented on the map, mark one of the structures with a point.
- (2) Construct a small rectangle around the point with fine pencil lines connecting the nearest 2.5' or 5' graticules. Graticules are intersections of latitude and longitude lines that are marked on the map edge, and appear as black crosses at four points in the interior of the map.
- (3) Read and record the latitude and longitude (in degrees, minutes, and seconds) for the southeast corner of the small quadrangle drawn in step two. The latitude and longitude are printed at the edges of

the map.

- (4) To determine the increment of latitude above the latitude line recorded in step 3,
 - position the map so that you face west;
 - place the ruler in approximately a north-south alignment, with the "0" on the latitude line recorded in step 3 with the ruler edge intersecting the point.

Without moving the ruler, read and record:

- the measurement from the latitude line to the desired point (the point distance);
- the measurement from the latitude line to the north line of the small quadrangle (the total distance).

Determine the number of seconds to be added to the latitude recorded in step 3 by using the ratio:

$$\frac{\text{Point distance}}{\text{Total distance}} \times 150'' = \text{increment of latitude between lines}$$

[Note: 150'' is the number of seconds of arc for the side of the small quadrangle on a 7.5' map. If you are using a 15' map, the multiplication factor is 300'' instead of 150'' since each graticule is 5' of latitude or longitude.]

For example:

$$\begin{array}{rcl} \text{Point distance} & = & 99.5 \\ \text{Total distance} & = & 192.0 \\ \hline \frac{99.5}{192.0} \times 150'' & = & 77.7'' \\ & = & 01'17.7'' \\ (60'' = 1'; 77.7'' = 60'' + 17.7'' = 01' 17.7'') \end{array}$$

$$\begin{array}{rcl} \text{Latitude in step 3} & & 32\#7'30'' \\ \text{Increment} & & + 01'17.7'' \\ \hline \text{Latitude of point} & & 32\#8'47.7'' \end{array}$$

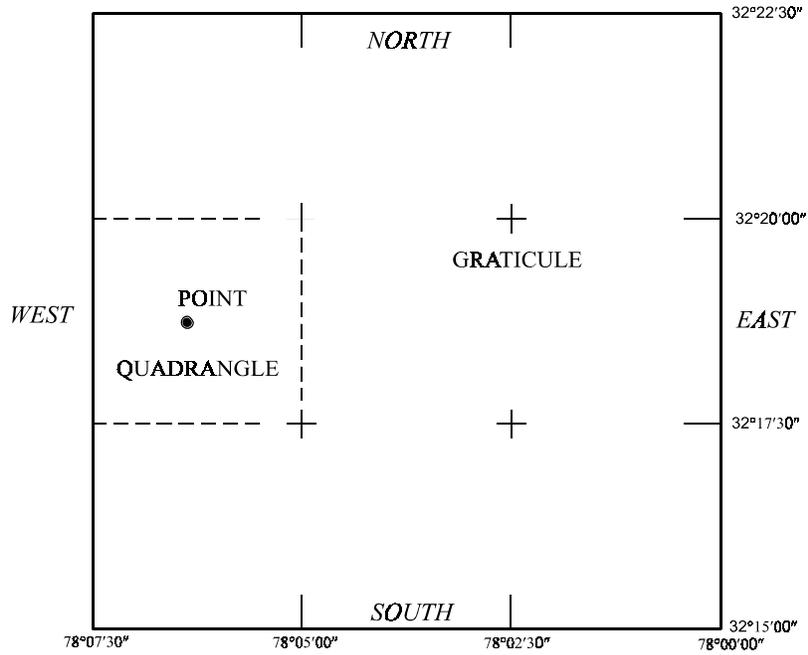
to the nearest second = 32#8'48''

- (5) To determine the increment of longitude west of the longitude line recorded in step 3,
 - position the map so that you face south;

Latitude/Longitude Diagram

Point Latitude 32°18'48" North, Longitude 78°06'05" West

**Note: This diagram is based on a USGS 7.5 Minute Series Topographic Map.
It is not drawn to scale.**



Appendix F. State Designated Section 313 Contacts

Submitting by Diskette to States: As of the publication of this book the following states confirmed that they accept diskette submissions. Do not send submissions via email.

| | | | | | |
|-----------------|----|----|----|-----------------|----|
| AK | GA | LA | NH | OR | VT |
| AL | HI | MD | NJ | PA | WA |
| AZ ² | IA | MI | NM | SC ¹ | WI |
| CA | ID | MN | NV | SD | WV |
| CO | IL | MO | NY | TX | WY |
| DE | IN | MT | OH | UT | |
| FL | KS | ND | OK | VA | |

If your state is not listed here, please contact your state office to confirm that paper submissions are required.

Alabama

Mr. Kirk Chandler
Alabama Emergency Response Commission
Alabama Department of Environmental
Management
P.O. Box 301463
Montgomery, AL 36130-1463
334 260-2714; fax 334 272-8131
kfc@adem.state.al.us

Certified Mail/Fed Ex

Alabama Emergency Response Commission
1890-A Congressman W.L. Dickinson Dr.
Montgomery, AL 36109-2600

Alaska

Ms. Camille Stephens
Department of Environmental Conservation
Division of Spill Prevention and Response
410 Willoughby Ave., Suite 105
Juneau, AK 99801-1795
907 465-5242; fax 907 465-5244
camille_stephens@envircon.state.ak.us

American Samoa

Mr. Togipa Tausaga, Director
American Samoa Environmental Protection Agency
Office of the Governor
Pago Pago, AS 96799
International Number 684 633-2304;
fax 684 633-5801
asepa@samoatelco.com

Arizona²

Mr. Daniel Roe, Executive Director
Arizona Emergency Response Commission
5636 East McDowell Road
Phoenix, AZ 85008
602 231-6345; fax 602 392-7519
roed@dem.state.az.us

Mr. Bill Quinn

Arizona Department of Environmental Quality
Pollution Prevention Program, Mail Code 4415A-1
1110 West Washington Street
Phoenix, AZ 85007-2955
602 771-4203; fax 602 771-4138
quinn.bill@ev.state.az.us

Arkansas

Mr. Robert Johns
Arkansas Department of Emergency Management
P.O. Box 758
Conway, AR 72033-0758
501 730-9790; fax 501 730-9754
robert.johns@adem.state.ar.us

Certified Mail ONLY

Mr. Robert Johns
Arkansas Dept. of Emergency Management
1835 South Donaghey
Conway, AR 72032

¹ South Carolina accepts only diskette submissions.

² Arizona Emergency Response Commission accepts electronic submissions while the Arizona Dept. of Environmental Quality accepts only paper submissions. Submissions must be sent to both agencies.

California

Coordinator
California Environmental Protection Agency
Office of Environmental Information Management,
1001 I Street, 8th Floor
Sacramento, CA 95812-0806
Attn: Toxics Release Inventory
Lynda Deschambault (USEPA Region 9)
415 947-4180; fax 415 947-3538

Certified or Express Mail Only

California Environmental Protection Agency
Office of Environmental Information Management
400 P Street
Sacramento, CA 95812
Attn: Toxics Release Inventory

Colorado

Mr. Kirk Mills
Pollution Prevention Program
Colorado Department of Public Health and
Environment
4300 Cherry Creek Drive South
Denver, CO 80246-1530
303 692-2977; fax 303 782-4969
kirk.mills@state.co.us
<www.cdphe.state.co.us/environ.asp>

Commonwealth of Northern Mariana Islands

Mr. Joe I. Castro, Jr., Director
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Third Floor, Morgan Building, San Jose
P.O. Box 96950-1340
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fax 670 664-8540
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Connecticut

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Department of Environmental Protection
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joseph.pulaski@po.state.ct.us

Delaware

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Toxics Release Inventory Program
Air Quality Management Section, DNREC
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john.parker@state.de.us

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Ms. Michele Penick
Environmental Planning Specialist
Emergency Response Commission for Title III
2000 14th Street, NW, 8th Floor
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202 673-2101, ext. 1159; fax 202 673-2290
michele.penick@dc.gov

Florida

Mr. Sam Brackett
State Emergency Response Commission
Florida Department of Community Affairs
2555 Shumard Oak Blvd.
Tallahassee, FL 32399-2100
850 413-9970; fax 850 488-1739
sam.brackett@dca.state.fl.us

Georgia

Dr. Bert K. Langley
Georgia Environmental Protection Division
7 Martin Luther King, Jr. Drive
Room 643
Atlanta, GA 30334
404 656-6905; fax 404 657-7893
bert_langley@mail.dnr.state.ga.us

Guam

Mr. Francis Damian
Guam Environmental Protection Agency
Air and Land Division
P.O. Box 20439
Barrigada, GU 96921
International Number 671 475-1607;
fax 671 477-9402
fpdamian@guamepa.gov.guam.net

Hawaii

Mr. Denis Shimamoto
Hawaii State Emergency Response Commission
Hawaii Department of Health
919 Ala Moana Blvd., Room 206
Honolulu, HI 96814
808 586-4694; fax 808 586-7537
heer@eha.health.state.hi.us

Idaho

Mr. Bill Bishop
Bureau of Hazardous Materials
4040 Guard Street, Bldg. 600
Gowen Field
Boise, ID 83705-5004
208 422-5725; fax 208 442-4485
bbishop@bds.state.id.us

Illinois

Mr. Stan Ostrem
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Certified or Express Mail ONLY

Mr. Stan Ostrem
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Indiana Department of Environmental Management
150 West Market Street, Suite 703
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Iowa

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Emergency Response Unit
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Kansas

Mr. Scott Bangert, Environmental Scientist
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Bureau of Air and Radiation
Asbestos and Hazardous Chemical Information Unit
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Topeka, KS 66612-1366
785 296-1689; fax 785 296-1545
sbangert@kdhe.state.ks.us

Kentucky

Mr. Bob Logan
Kentucky Department for Environmental Protection
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Frankfort, KY 40601-1132
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Ms. Linda Brown
Department of Environmental Quality
Office of Environmental Assessment Evaluation
Division
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Linda Brown
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Office of Environmental Assessment
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Maine

TRI Coordinator
Senior Hazardous Materials Planner
State Emergency Management Agency
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robert.s.gardner@state.me.us

Maryland

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Community Right-to-Know Section
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410 537-3800; fax 410 537-3873
pwilliams@mde.state.md.us

Massachusetts

Mr. Walter Hope
Massachusetts Department of Environmental
Protection
Bureau of Waste Prevention
1 Winter Street
Boston, MA 02108
617 292-5982; fax 617 292-5858
walter.hope@state.ma.us

Michigan

Mr. Robert Jackson
State Emergency Planning and Community
Right-to-Know
Michigan Dept. of Environmental Quality
Environmental Science and Services Division
P.O. Box 30457
Lansing, MI 48909
517 373-8481; fax 517 241-7966
jacksorc@michigan.gov
<www.michigan.gov/deq/0,1607,7-135-3307_3667_4138---,00.html>

Overnight Mail

Mr. Robert Jackson
Michigan Dept. of Environmental Quality
Environmental Science and Services Division
Constitution Hall, 1 North
525 West Allegan
Lansing, MI 48933

Minnesota

Mr. Steve Tomlyanovich
Department of Public Safety
Emergency Response Commission
444 Cedar Street, Suite 223
St Paul, MN 55101
651 282-5396; fax 651 296-0459
steve.tomlyanovich@state.mn.us

Mississippi

Mr. John David Burns, TRI Coordinator
Mississippi Department of Environmental Quality
P.O. Box 20305
Jackson, MS 39289-1305
601 961-5005; fax 601 961-5660
Community Right-to-Know Hotline 800 535-0202
john_d_burns@deq.state.ms.us

Missouri

Mr. Gene Nickel
Missouri Department of Natural Resources
Environmental Assistance Office
P.O. Box 176
Jefferson City, MO 65102
573 526-6627; 1-800-361-4827
fax 573 526-5808
nrnicke@dnr.state.mo.us

Certified Mail ONLY

Gene Nickel
Missouri Department of Natural Resources
Environmental Assistance Office
1659 East Elm Street
Jefferson City, MO 65102

Montana

Mr. Tom Ellerhoff
Montana Emergency Response Commission DEQ
Metcalf Building
1520 East 6th Avenue
Helena, MT 59620-0901
406 444-5263; fax 406 444-4386
tellerhoff@state.mt.us

Navajo Nation

Mr. Calvert Curly, Acting Division Director
Navajo Environmental Protection Agency
P.O. Box 339
Window Rock, AZ 86515
928 871-7692
Fax: 928 871-7996

Nebraska

Mr. Donnie Zach
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 Nebraska Department of Environmental Quality
 P.O. Box 98922
 Lincoln, NE 68509-8922
 402 471-4251; fax: 402 471-2909
donnie.zach@ndeq.state.ne.us

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Donnie Zach
 SARA Title III and NEPCRA Coordinator
 Nebraska Dept of Environmental Quality
 1200 N Street, Suite 400
 Lincoln, NE 68509

Nevada

Ms. Alene Coulson
 c/o State Emergency Response Commission
 555 Wright Way
 Carson City, NV 89711-0925
 775 687-9464; fax: 775 687-6396
acoulson@govmail.state.nv.us

New Hampshire

Mr. Leland Kimball
 New Hampshire Office of Emergency
 Management Agency, Title III Program
 State Office Park South
 107 Pleasant Street
 Concord, NH 03301
 603 271-2231; fax 603 225-7341
leek@nhoem.state.nh.us

New Jersey

Mr. Andrew Opperman
 Department of Environmental Protection
 EPCRA Section 313
 Bureau of Chemical Release Information &
 Prevention
 P.O. Box 405
 Trenton, NJ 08625-0405
 609 292-6714; fax 609 633-7031
andy.opperman@dep.state.nj.us

New Mexico

Mr. Jerry J. Lazzari, TRI Coordinator
 New Mexico Department of Public Safety
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 P.O. Box 1628
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Mr. Jerry J. Lazzari, TRI Coordinator
 Office of Emergency Services and Security
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 Santa Fe, NM 87508

New York

Ms. Susanne Wither
 New York State Department of Environmental
 Conservation
 Pollution Prevention Unit
 625 Broadway, 12th Floor
 Albany, NY 12233-8010
 518 402-9488; fax: 518 402-9470
smwither@gw.dec.state.ny.us

North Carolina

Anthony B. Bonapart
 North Carolina Division of Emergency Management
 4714 Mail Service Center
 Raleigh, NC 27699-4714
 919 733-3899; fax 919 733-2860
 Hotline: 919 733-1361
 1-800-541-1403 (NC only)
Abonapart@ncem.org

North Dakota

Mr. Ray DeBoer
 North Dakota State Division of Emergency
 Management
 P.O. Box 5511
 Bismarck, ND 58502-5511
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rdeboer@state.nd.us

Certified Mail ONLY

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 Fraire Barracks Road, Building 35
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Certified Mail ONLY

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Ohio Environmental Protection Agency
Lazarus Government Center
122 South Front Street
Columbus, OH 43215

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Risk Communication
P.O. Box 1677
Oklahoma City, OK 73101-1677
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fax 405 702-1001
monty.elder@deq.state.ok.us

Certified Mail

Oklahoma Department of Environmental Quality
707 N. Robinson
Oklahoma City, OK 73102

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Office of State Fire Marshall
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503 378-3473 (ext. 262); fax 503 373-1825
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fax 717 783-5099
pennsafe@dli.state.pa.us
<www.dli.state.pa.us>

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Thomas J. Ward, Jr.
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Mr. Genaro Torres
Director of Superfund and Emergencies
Title III-SARA Section 313
Environmental Quality Board
Fernandez Junco Station
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Santurce, PR 00910
787 766-2823; fax 787 766-0150
jcaemer@prtc.net

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Director of Superfund and Emergencies
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Attn: Toxic Release Inventory
401 222-2808 (ext. 7030); fax 401 222-2017
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South Carolina Department of Health and
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3 South Carolina accepts only diskette submissions

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Texas**U.S. Postal Service Delivery
including Certified Mail**

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 Texas Natural Resource Conservation Commission
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 Austin, TX 78711-3087
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toxic@tnrcc.state.tx.us

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 Utah Department of Environmental Quality
 Division of Environmental Response and
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 801 536-4143; fax 801 536-4242
mzucker@utah.gov

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Mr. Paul Van Hollebeke
 Vermont Department of Environmental Conservation
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 103 S. Main St.
 Waterbury, VT 05671-0411
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paulv@dec.anr.state.vt.us

Virgin Islands

Mr. Hollis L. Griffin
 Department of Planning and Natural Resources
 Division of Environmental Protection
 Cyril E. King Airport
 Terminal Building, 2nd Floor
 St. Thomas, VI 00802
 St. Croix: 340 773-0565; fax 340 773-9310
 St. Thomas: 340 774-3320; fax 340 714-9549
hgrif12@viaccess.net

Virginia

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 Virginia Emergency Response Commission
 Virginia Dept. of Environmental Quality
 SARA Title III Program
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 Richmond, VA 23240-0009
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drhuang@deq.state.va.us

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 SARA Title III Program
 Virginia Department of Environmental Quality
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 Richmond, VA 23219

Washington**U. S. Postal Service Delivery
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Ms. Idell Hansen
 Department of Ecology
 Hazardous Waste/Toxics Reduction Program
 P.O. Box 47659
 Olympia, WA 98504-7659
 360 407-6727 or 800 633-7585;
 fax 360 407-6715
ihan461@ecy.wa.gov

Federal Express or UPS Mail ONLY

Ms. Idell Hansen
Department of Ecology
Hazardous Waste/Toxics Reduction Program
300 Desmond Drive
Lacey, WA 98503

West Virginia

Mr. Stephen Kappa
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West Virginia Office of Emergency Services
1900 Kanawha Blvd. (Building 1, Room EB-80)
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skappa1@wvoes.state.wv.us

Wisconsin

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Toxics Release Inventory Coordinator
Wisconsin Department of Natural Resources
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Wyoming Emergency Management Agency
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btenbo@state.wy.us

Notes:

(1) If an Indian tribe has chosen to act independently of a state for the purpose of section 313 reporting, facilities located within the Indian community should report to the tribal SERC, or until the SERC is established, the Chief Executive Officer of the Indian tribe, as well as to EPA; (2) Facilities located within the Territories of the Pacific should send a report to the Chief Administrator of the appropriate territory, as well as to EPA.

Appendix G. Section 313 EPA Regional Contacts

Region 1 (CT, ME, MA, NH, RI, and VT)

Dwight Peavey
Assistance and Pollution Prevention Office
USEPA Region 1 (SPT)
1 Congress Street, Suite 11000
Boston, MA 02114-2023
617 918-1829; fax 617 918-1810
peavey.dwight@epa.gov

Region 2 (NJ, NY, PR, and VI)

Nora Lopez
Pesticides and Toxic Substances Branch
USEPA Region 2 (MS-105)
2890 Woodbridge Avenue, Building 10
Edison, NJ 08837-3679
732 906-6890; fax 732 321-6788
lopez.nora@epa.gov

Region 3 (DE, DC, MD, PA, VA, and WV)

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Toxics Programs and Enforcement Branch
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1650 Arch Street
Philadelphia, PA 19103-2029
215 814-2072; fax 215 814-3114
reilly.william@epa.gov

Region 4 (AL, FL, GA, KY, MS, NC, SC, TN)

Ezequiel Velez
EPCRA Enforcement Section
USEPA Region 4 Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, GA 30303-8960
404 562-9191; fax 404 562-9163
velez.ezequiel@epa.gov

Region 5 (IL, IN, MI, MN, OH, and WI)

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codina.thelma@epa.gov

Region 6 (AR, LA, NM, OK, and TX)

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Toxics Section, Multimedia Planning and Permitting
Division
USEPA Region 6 (6PD-T)
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Dallas, TX 75202-2733
(214) 665-8116; fax (214) 665-6762
wakeland.morton@epa.gov

Region 7 (IA, KS, MO, and NE)

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USEPA Region 7 (ARTD/CRIB)
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Kansas City, KS 66101
913 551-7315; fax 913 551-7065
wurtz.stephen@epa.gov

Region 8 (CO, MT, ND, SD, UT, and WY)

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Office of Pollution Prevention, Pesticides and Toxics
USEPA Region 8 (8P-P3T)
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Denver, CO 80202-2466
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dhieux.joyel@epa.gov

Region 9 (AS, AZ, CA, GU, HI, MH, MP, and NV)

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Toxics Section
USEPA Region 9 (CMD4-2)
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deschambault.lynda@epa.gov

Region 10 (AK, ID, OR, and WA)

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Seattle, WA 98101-1128
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colt.christina@epa.gov

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Appendix H. Other Relevant Section 313 Materials

Public Data Release

2000 Toxics Release Inventory Public Data Release State Fact Sheets (EPA 260-F-02-004)

The fact sheets can be found on the Internet at www.epa.gov/tri/tridata/tri00/state/index.htm. The 2000 Toxics Release Inventory (TRI) State Fact Sheets report includes TRI data for each state. In addition, the report provides a general overview of TRI and the 2000 TRI data, a description of the information included in the state fact sheet, and data summary tables. This report provides a detailed analysis of each state's data for the manufacturing industries (those industries reporting since 1988) and the seven major industrial sectors reporting for the first time in 1998. EPA provides this type of analysis as a snapshot of each state's releases and other waste management.

2000 Toxics Release Inventory Public Data Release Report (EPA 260-R-02-003)

This publication can be found on the Internet at www.epa.gov/tri/tridata/tri00/index.htm. The 2000 Toxics Release Inventory (TRI) Public Data Release Report, published in May 2002, provides an overview of the 2000 TRI reporting year data. This report provides: detailed analyses and supporting tables for TRI releases and other waste management; an overview of the seven new industry sectors reporting to TRI for the first time in 1998; an analysis of the geographic distribution of TRI releases and other waste management; an analysis of interstate and intrastate transport of TRI chemicals in the US; and other information relating to TRI data.

Access to TRI Information On-line

The **TRI Home Page** www.epa.gov/tri offers information useful to both novice and experienced users of the Toxics Release Inventory. It provides, in lay terms, a description of what TRI is, how it can be used, TRI data, and TRI rules and guidance. You can find out about TRI products, view or download the 2000 TRI data release reports, and identify who to contact for more information in EPA regions and state programs across the country. From the TRI home page, you can "link" to other EPA and non-EPA sites that allow you to search the TRI database online.

TRI Explorer www.epa.gov/triexplorer is an on-line tool that EPA has created to allow for searches of the TRI data. It allows the user to search using five criteria: facility, chemical, year or industry type (SIC code), and geographic area (at the county, state or national level). The tool will

generate three types of reports: (1) Release Reports (including on- and off-site releases (i.e., off-site releases include transfers off-site to disposal and metals and metal compounds transferred to POTWs)); (2) Waste Transfer Reports (including amounts transferred off-site for further waste management but not including transfers off-site to disposal); and (3) Waste Quantity Reports (including amounts recycled, burned for energy recovery, quantities treated, and quantities released).

TOXNET® toxnet.nlm.nih.gov/, the National Library of Medicine's (NLM) Toxicology Data Network, provides free access to TRI data. Users can search by chemical or other name, chemical name fragment, or Chemical Abstracts Service Registry Number. Also searchable are facility or parent company name, state, city, county, or zip code. Search results can be limited to releases greater than a specified number of pounds, and individual releases can be summed together to display a total amount.

RTK-Net www.rtk.net is an online network concerned with environmental issues, in particular, matters arising from the passage of right-to-know provisions embodied in EPCRA legislation. RTK-net was established by two non-profit organizations (Unison Institute and OMB Watch) to provide access to TRI, link TRI with other environmental data, and exchange information among public interest groups. RTK-Net is a full-service center providing free dial-in access privileges to complete database services, training and technical support, e-mail and electronic conferences pertaining to issues such as health, activism, and environmental justice. For more information contact:

RTK-Net
1742 Connecticut Ave., N.W.
Washington, D.C. 20009-1171
202 234-8494

Other TRI Information

EPA's Integrated Risk Information System (IRIS) www.epa.gov/iris is an electronic database containing information on human health effects that may result from exposure to various chemicals in the environment. IRIS was initially developed for EPA staff in response to a growing demand for consistent information of chemical substances for use in risk assessments, decision-making and regulatory activities. The information in IRIS is intended for those without extensive training in toxicology, but with some knowledge of health sciences.

Consolidated List of Chemicals Subject to Reporting Under the Act (Title III List of Lists), (November 1998)
<www.epa.gov/ceppo/pubs/title3.pdf>

Available as an IBM compatible disk from: The National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, 703 605-6000, Document Number: PB98-500473, \$69.00.

Chemicals in Your Community, A Citizen's Guide to the Emergency Planning and Community Right-to-Know Act, December 1999 (EPA 550-99-001)

This booklet is intended to provide a general overview of the EPCRA requirements and benefits for all audiences. Part I of the booklet describes the provisions of EPCRA and Part II describes more fully the authorities and responsibilities of groups of people affected by the law. Available through written request at no charge from:

Emergency Planning and Community Right-To-Know Call Center
1200 Pennsylvania Ave., NW (5101)
Washington, DC 20460
800 424-9346

Chemicals in the Environment

Issue number 6 of Chemicals in the Environment (CIE), published in the Fall of 1997, is devoted entirely to TRI. This 22 page publication contains 19 articles ranging from the history of TRI to the future of new TRI products. Articles include perspectives from the community, state, Federal, and International level. The publication also provides valuable information on training and contacts within the EPA. CIE is available free from EPA by asking for publication EPA 749-R-97- 001b. To request copies, contact:

U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., N.W.
Attn: TRI Documents
MC: 2844
Washington, DC 20460

202 564-9554
Email: TRIDOCS@epa.gov

The Pollution Prevention Information Clearinghouse (PPIC)

PPIC was established as part of EPA's response to the Pollution Prevention Act of 1990, which directed the Agency to compile information, including a database, on management, technical, and operational approaches to source reduction. PPIC provides information to the public and industries involved in conservation of natural resources and in reduction or elimination of pollutants in facilities, workplaces, and communities.

To request EPA information on pollution prevention or obtain factsheets on pollution prevention from various state programs call the PPIC reference and referral service at 202 566-0799, or fax a request to 202 566-0794, or write to:

U.S. EPA
Pollution Prevention Information Clearinghouse (PPIC)
EPA West
1200 Pennsylvania Ave. NW
Room 3379 (Mail Code 7407-T)
Washington, DC 20460-0001

Email: ppic@epa.gov

Appendix I. Sample Revision and Withdrawal Letters

REQUEST FOR WITHDRAWAL

Facility Name
Facility Mailing Address

Date: _____

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513

Attention: TRI Withdrawal Request

To whom it may concern:

(Fill in your facility name and TRIFID here) _____ is requesting a withdrawal for the following submission filed under EPCRA Section 313 from EPA's database (i.e. the Toxics Release Inventory System (TRIS)):

Chemical Name Reported: _____

CAS Number/Category Code: _____

Report Type (please check one): **Form R** - **Form A Certification** -

Reporting Year: _____

Reason(s) for Withdrawal: _____

Please include a copy of Form R or Form A certification you want to withdraw.

The technical contact is: Insert name here and may be reached at:
Insert telephone number here.

Requester's Name: _____

Requester's Signature: _____

Address: _____

(*if different from facility _____

address or facility mailing

address)

Please submit a copy of the request to appropriate state agency, if required.

REQUEST FOR REVISION

Facility Name
Facility Mailing Address

Date: _____

TRI Data Processing Center
P.O. Box 1513
Lanham, MD 20703-1513
Attention: TRI Revision Request

To whom it may concern:

(Fill in your facility name and TRIFID here) _____ is requesting a revision for the following submission filed under EPCRA Section 313 from EPA's database (i.e. the Toxics Release Inventory System (TRIS)):

Chemical Name Reported: _____
CAS Number/Category Code: _____
Report Type (please check one): **Form R** - **Form A Certification** -
Reporting Year: _____
Reason(s) for Revision: _____

Please include a copy of Form R or Form A certification (revision box checked) you want to revise.

The technical contact is: Insert name here and may be reached at: _____
Insert telephone number here .

Requester's Name: _____
Requester's Signature: _____
Address: _____
(*if different from facility _____
address or facility mailing
address)

Please submit a copy of the request to appropriate state agency, if required.

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